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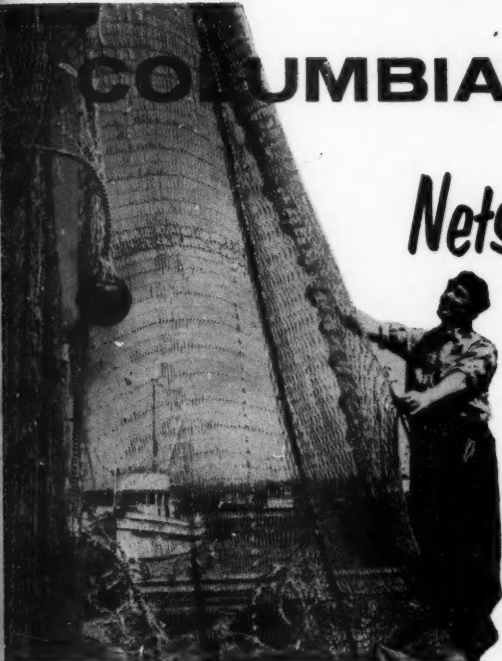
# NATIONAL FISHERMAN

AUGUST  
1960

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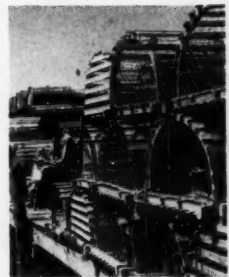


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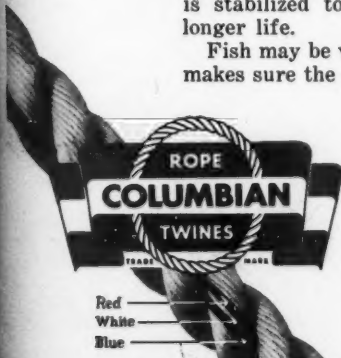
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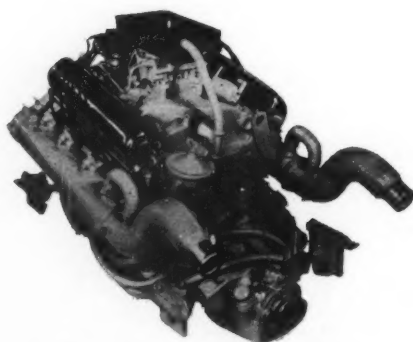
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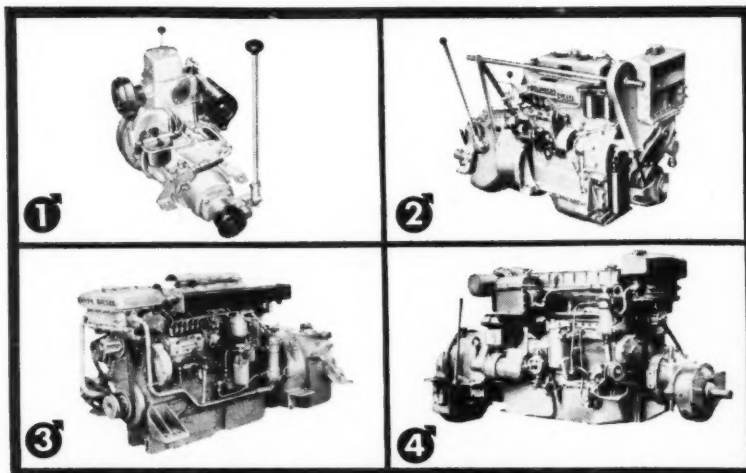
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## The Lookout

### Oceanographic Research

In a report of the National Academy of Sciences' Committee on Oceanography, Howard H. Eckles, Bureau of Commercial Fisheries, Washington, D. C., explained the need for the Committee's proposed 10-year program of oceanographic research.

"All fishermen," he said, "suffer the vagaries of nature, of scarcity at one time, over-plenty at another. Economic conditions act in various ways to alter prices. These factors add to the fishermen's problems by providing a fluctuating, un dependable income. We lack understanding of nature's effects upon fish abundance, and the effect of these changes upon all types of fishing.

"Assume that we have complete knowledge of how fish react to combinations of various stimuli and that we can apply this knowledge to catch fish.

"We must (also) know how many fish of all kinds are in the sea, how they are distributed, what factors control their abundance, how they respond to various stimuli, how they can be caught at the right time in their life to ensure maximum production, and how many to spare so that future production is assured.

"The last item is very important. For each species we must know the maximum rate at which fish may be caught and still assure future production, for with such efficient methods of fishing it would be easy to reduce abundance quickly and endanger spawning stocks. Knowledge derived through oceanography can lead to wise fishing practices, better working conditions, and reduced production time and costs.

"Besides revolutionizing methods for harvesting the sea, new research can lead to development of other ways of producing fishery products, for example, farming the edge of the sea; growing shrimp, oysters, and fish in ponds.

"Under controlled conditions, more desirable products could be developed through selective breeding, predators could be controlled, the environment manipulated, and the animals fed on highly nutritive diets for rapid growth. Fish and shellfish could be grown to market size in a few months.

"Relative to other scientific endeavors progress in marine science has been slow—handicapped by insufficient manpower, ships and shore facilities. This has prevented an adequate understanding of the occurrence, behavior, and potential harvest of fish and other marine organisms—a serious barrier to their full economic development and utilization."

# NATIONAL FISHERMAN

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## CONTENTS

Pacific Coast Studies Add New Shrimp Grounds	7
52nd Annual Oyster Convention Hears Need For Co-operative Research Effort	8
Changing Great Lakes Fisheries Require New Fishing Methods, Research	10
Chipman Named Radiobiology Consultant for Fish Bureau	12
Few Other Fish Taken in Gulf Menhaden Catches	14
New Fishing Areas Found Off Washington Coast	14
Research Unlocks Secrets of Bottom Fish Movements	16
International Shrimp Group Predicts Sales Increase	16
New Bedford Scallops Get Boost from Third Annual Festival	17
Propose Liberalized Fishing Regulations in Michigan	27
New Canadian Dragger "Colville Bay"	29
Fish 'N Seafood Week Plans Underway	29

### REGIONS

North Atlantic	17
South Atlantic	11
Gulf of Mexico	13
Great Lakes	27
Pacific Coast	14

### DEPARTMENTS

Fishery Progress	4
Equipment & Supply News	30
Boat Catches	33
Where-to-Buy Directory	36
Foreign Bailings	37
Boat & Gear Mart	38

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## FISHERY PROGRESS

### ► Sponge Industry Relief

A bill to prohibit the importation into the United States of commercial sponges measuring less than 5 inches in diameter, was introduced in the House in July and referred to the Committee on Ways and Means.

This legislation is to prohibit the buying of foreign sponges under 5 inches in diameter as they are competing unfairly with the American industry.

The American sponge industry is prohibited the taking of sponges less than 5 inches in diameter, while imports of sponges that size and smaller are permitted to enter the United States.

### ► Frozen Holdings Down

A total of 146.6 million pounds of fish and shellfish was held in cold storage on May 31, 1960. These holdings were 9 percent below those on May 31, 1959 but 10 percent above April 30, 1960.

Holdings on the last day of May, 1960, consisted of 61 percent salt-water fish, 25 percent shellfish, 11 percent bait and animal food, and 3 percent fresh-water fish.

Holdings of frozen salt-water fish on May 31, 1960 amounted to 89.6 million pounds compared with 79.0 million pounds on the last day of the previous month, and 101.2 million pounds on May 31, 1959. Shellfish holdings totaled 36.6 million pounds. Fresh-water fish accounted for 4.6 million pounds.

The principal items held on the last day of the month were raw headless shrimp, 17.5 million pounds; dressed halibut, 11.9 million pounds; haddock fillets, 7.6 million pounds; cod fillets, 7.5 million pounds; ocean perch fillets, 7.1 million pounds; and spiny lobster tails, 4.0 million pounds.

### ► Fisheries Loan Fund

During fiscal year 1960, (July 1, 1959 to June 30, 1960) 190 applications for fisheries loans, valued at \$5,328,946 were received by the U. S. Bureau of Commercial Fisheries.

Of the total, 105 applications for \$2,220,000 were approved and 65 applications for \$1,930,000 were declined or found ineligible. Funds are available for additional loans and new applications will be processed promptly.

From the beginning of the program in 1956 through June 30, 1960, a total of 777 applications for \$24,230,000 have been received. Of these, 422 (\$9,933,300) have been approved, 267 (\$7,370,000) have been declined or found ineligible, 66 (\$4,230,000) have been withdrawn by applicants before being processed, and 22 (\$1,622,700) are pending.

### ► New Type Fish Finder

The Bureau of Commercial Fisheries research vessel *Delaware* has acquired a new type underwater searching device whose purpose is to locate and track schools of fish as well as reveal the presence of underwater obstacles such as sandbars, shoals, sunken wrecks, etc.

The new listening device, which is to be tested by the exploratory fishing and gear research vessel *Delaware*, should allow a fishing vessel to search the adjacent waters for two miles for the presence of fish.

### ► Sardine Marketing Report

A sizeable amount of canned sardines marketed in the United States are purchased by consumers on impulse according to a survey of consumer attitudes toward canned sardines.

The report is based on a survey of factors that motivate consumer preferences for canned sardines conducted by a research corporation from Philadelphia. The survey found that 12 percent in Boston, 21 percent in Birmingham, Alabama, and 31 percent of sardine users in Detroit bought sardines on impulse.

When asked what would induce them to use more sardines, seventeen percent in Birmingham and 15 percent in Detroit stated that a lower price would increase their consumption. Only 4 percent in Boston mentioned price.

Removal of bones and/or removal of skin were also mentioned as inducements for greater consumption by about 20 percent of the consumers interviewed in Detroit, 10 percent in Boston, and 8 percent in Birmingham.

### ► Propose Stern Ramp Trawler

A joint resolution to authorize the Secretary of Commerce to construct a modern stern ramp trawler to be used for research purposes and authorizing the appropriation of funds was presented in the Senate recently.

This legislation would provide for the Secretary of Commerce to be authorized to consult with the Secretary of the Navy and Secretary of the Interior to determine the appropriate size, design, and equipment for a large, modern, stern ramp trawler with scientific facilities suitable for use in general oceanographic studies.

The vessel would also be used as a research vessel to develop basic fisheries sciences and advanced techniques for production, preparation, and preservation of fisheries products, from areas distant from ports and subject to severe weather and navigational difficulties.



### ► Fisheries Advisory Committee

Six members of the American Fisheries Advisory Committee whose terms expired, have been reappointed to 3-year terms, Assistant Secretary of the Interior Ross Leffler announced recently.

The appointees include: Ralph E. Carr, President, Mid-Central Fish Co., Kansas City, Mo.; Chris Dahl, Kayler-Dahl Fish Co., Petersburg, Alaska; H. R. Humphreys, Jr., President, Standard Products Co., White Stone, Va.

Others were Leon S. Kenney, President, Pinellas Seafood Co., St. Petersburg, Fla.; James McPhillips, Vice President, Southern Industries Corp., Mobile, Ala.; and Arthur H. Mendonca, President, F. E. Booth Co., Inc., San Francisco, Cal.

Kenney and Mendonca have served with the committee since it was organized on February 14, 1955.

### ► Seek Export Increase

Methods by which government agencies can help the American fishing industry increase exports to foreign markets are being studied by the U. S. Department of the Interior as a result of the Government-Industry export conference recently.

The conference was sponsored by the Department of the Interior with cooperation of the Departments of Commerce and State and was attended by representatives of a number of the major fishing and fish processing industries.

Industry spokesmen pointed out numerous trade impediments such as high tariffs and taxes, import licenses, excessive exchange guarantees as well as transportation cost differentials, and labeling requirements.

Others pointed out the need for more prompt and precise reporting of foreign market conditions, on process of foreign products, costs of production and the intent of foreign countries to purchase fishery products, the need for better export credit facilities and risk insurance, especially for small companies.

### ► Gulf Shrimp Commission

The Commission for the conservation of shrimp in the eastern Gulf of Mexico held its first meeting at Havana, Cuba, from June 30 to July 1. Donald L. McKernan, director of the U. S. Bureau of Commercial Fisheries, was elected chairman, and Dr. Isabel Perex Farfante of Cuba was elected vice-chairman.

The commission agreed on coordinated research program that would meet its obligation under the convention to maintain maximum sustainable productivity of stocks of shrimp of common concern to Cuba and the United States in waters of the Gulf of Mexico off the coast of the two countries.



## Spongex floats a MUST

... says Captain Norman Mezin, San Pedro, Calif.

"We consider Spongex floats a *MUST* aboard the 'Determined', our 121' tuna purse seiner," says Captain Norman Mezin of San Pedro, California. "We were one of the first tuna bait boats to convert to purse seining. We added Spongex floats and have been very successful ever since."



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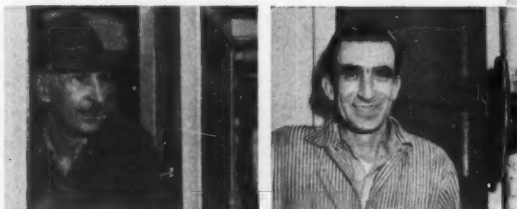
These B.F. Goodrich floats have earned enthusiastic approval by fishermen everywhere because of their toughness, light weight, permanent buoyancy. Practically indestructible, they won't break, crumble, need no maintenance. And they never waterlog to add extra weight to nets. B.F. Goodrich floats come in 17 sizes, ranging from 3" x 1½" to 6" x 14". For full information, write *The B.F. Goodrich Company, 192 Derby Place, Shelton, Connecticut.*

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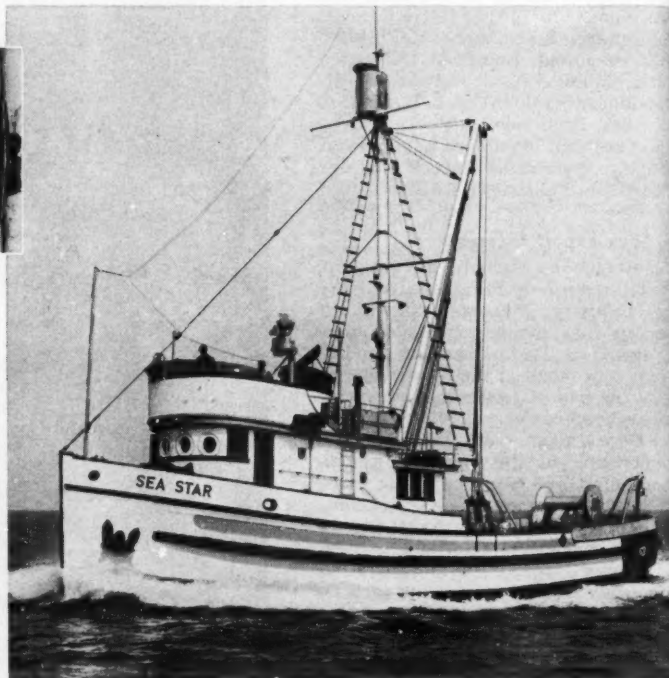
“Why did we buy the Waukesha Diesel for the *Sea Star*? Well, for one thing, it looks like a marine engine, and as far as we are concerned, it *delivers* like one. We liked the easy access to any part, should you wish to do any dismantling or repairing.

- Curiously enough, we were very much concerned over the cubic inch displacement of any engine, in relation to the horsepower it's supposed to deliver.

The *Sea Star* is a pretty hefty boat, and we wanted to have some excess power left above normal operating rpm. This we have with the Waukesha *Defender*. If we want to, we can take out 300 to 310 hp, or even the engine's top rated *continuous* output of 335 hp at 1215 rpm. • At 1025 rpm

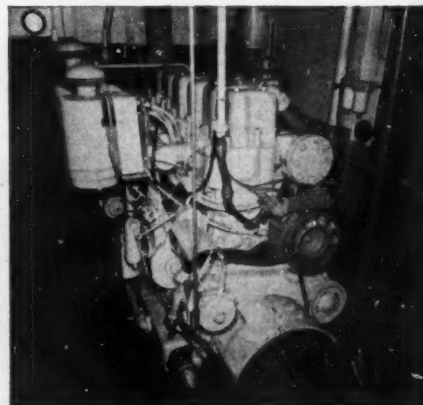
*Sea Star* now logs 10 knots, and at 1150 rpm of the engine, she logs 11 knots average; we made the 11 knot average on recent runs to and from Tacoma and Seattle. The 10 knot speed (at 1025 rpm) was logged over the Vashon Island measured mile course in Puget Sound. These performances convinced us that the Waukesha Diesel definitely has the power it's rated to deliver. • This Waukesha engine is smooth-running; there isn't a murmur at any engine speed. As a matter of fact, we can't find any critical rpm in the engine; she's smooth all the way through. • We like plenty of cubic inch displacement in any engine, and we get it in our Waukesha *Defender*. It has 2894 cu. in. displacement.

• We do not like 'bull' about engines; we deal with facts. • We are very pleased with the speeds obtained with the *Sea Star*'s new Waukesha Diesel.”



The *Sea Star* of Seattle, an 82-ft. trawler or dragger, is also used as a purse seiner for salmon or sardines. Vessel has a 21.4-ft. beam; 9.8-ft. register depth; tonnage, 107 gross, 72 net. Recently repowered, its new engine is a Waukesha *Defender* Diesel supplied and installed by Piston Service, Inc., of Seattle, Wash.

Powering the *Sea Star*—**WAUKESHA *Defender*** (Model LRDBC) a 2894 cu. in. normally aspirated Diesel; six cylinders, 8½-in. bore x 8½-in. stroke, 335 max. hp at 1215 rpm for 24-hr. duty. It turns the 64" diam. x 55" pitch propeller through a Twin Disc hydraulic clutch and reduction gear of 4.067:1 ratio. Head end of engine has a Twin Disc power take-off to drive vessel's power take-off system when desired. Send for Bulletin 1721.



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# Pacific Coast Studies Add New Shrimp Grounds

High demand, growing fleet, small productive area prompted search for new shrimp concentrations off coasts of Washington, Oregon

The ocean pink shrimp fishery off Grays Harbor, Wash., which began in 1956, has expanded rapidly following the introduction of mechanical shrimp peelers, which lowered the cost of processing and increased the capacity of processing plants. As the demand for shrimp increased, catches of ocean pink shrimp in Washington expanded from 40,000 pounds in 1956 to over 6.5 million pounds in 1958.

It was soon evident that the relatively small area being trawled off Grays Harbor would not fulfill the needs of the expanding industry. For this reason, four exploratory cruises were conducted outside known commercial fishing grounds off the coasts of Washington and Oregon with the U. S. Bureau of Commercial Fisheries exploratory fishing vessel *John N. Cobb*.

Ocean pink shrimp were found in good commercial quantities during all four cruises, while sidestripe, spot shrimp, and coonstripes were few in number, and brown shrimp, though present in many catches, were never in commercial quantities.

## Best Catches Off Tillamook Head

Explorations extended from Cape Beale, Vancouver Island, B. C., to Newport, Ore. During the four cruises, a total of 233 otter-trawl drags was made at depths ranging from 49 to 275 fathoms. The best shrimp catches during the explorations were made between the Columbia River and Cape Falcon, Ore., where a total of 74 exploratory drags was made. The largest catch in the area was taken west of Tillamook Head in 82-83 fathoms at an hourly rate of 2,804 pounds of heads-on shrimp, averaging 100 count. A 72-foot semiballoon trawl was used for the drag.

Seventeen other drags made in depths from 70 to 91 fathoms, between Columbia River and Cape Falcon, yielded heads-on shrimp at rates from 600 to 1,350 pounds an hour. Those shrimp ranged in size from 88 to 126 a pound. Six of the latter drags were made with the 72-foot semiballoon trawl. The majority of the larger catches in the area were obtained in a relatively narrow depth range, of 82 to 86 fathoms.

Off the Washington coast, good catches were made between Destruction Island and LaPush; and moderate catches were made northwest of Cape Flattery. Off Oregon, commercial concentrations of ocean pink shrimp were located west of Manhattan Beach and Cape Lookout.

Drags between 61 and 90 fathoms resulted in the highest catch rates, although fishing was also productive between 91 and 120 fathoms. Green mud, or green mud and sand bottom, characterized areas in which good shrimp catches were made. Bottom temperatures ranged between 42.1 and 46.7 degrees F. in the areas fished.

The surveys, carried out in cooperation with the fisheries agencies of the States of Washington and Oregon, were designed to acquire information concerning sizes, quantities, and availability of shrimp inhabiting offshore waters from northern Washington to central Oregon. The exploratory shrimp work began in March and terminated in November.

## Gulf of Mexico-Type Gear Used

A Gulf of Mexico-type flat trawl, 43' along the footrope and of 1½" mesh was the principal gear used in the explorations, and was towed from a single warp using a 25-fathom bridle. Doors measured 2½' x 5' and weighed

160 lbs. each. The net was attached directly to the back of the doors by 2' extension straps. The gear was set and hauled directly over the stern. The cod end was hauled to the stern with a lazyline as the net was retrieved, and the catch was hoisted aboard.

A 72' Gulf of Mexico-type semiballoon trawl was used occasionally. The net was rigged similarly to standard West Coast otter trawls, with single warps to each door, but only 12' extensions were used between the net and the doors. Trawl doors used with the net measured 3½' x 8' and weighed 385 lbs. each.

Three fathoms of towing warp were used for each fathom of depth. Towing speed averaged 2.8 knots, and drags were 30 minutes long. Catches were spilled onto a sorting table on the stern of the vessel. The shrimp were then washed and weighed and random samples of shrimp taken for study by biologists of the Washington Department of Fisheries or the Oregon Fish Commission.

Studies of previous investigations showed that between 40 and 90 fathoms on green mud, or mixed green mud and sand bottom, yielded best catches. Such areas were, therefore, intensively investigated. Exploratory drags were also made in waters deeper than 90 fathoms to determine the availability of other shrimp species. Information on the bottom type and bottom water temperature immediately above the bottom was obtained at the end of each drag.

The cruises extended 250 miles north and south along the Washington and the Oregon coasts and to a maximum of 38 miles offshore. In the region explored, the continental shelf averages about 20 miles in width and contains large portions exceeding 50 fathoms with terminations close to 100 fathoms. Sandy bottom predominates near shore, while mud, mud and sand, and occasionally gravel characterize the bottom at depths between 50 and 100 fathoms.

During the four cruises, 233 drags were made at depths ranging from 49 to 275 fathoms. For convenience, the region explored was divided into three areas: Cape Beale, Vancouver Island, to Point Grenville, Wash.; Point Grenville to Cape Falcon, Ore.; and Cape Falcon to Newport, Ore.

A total of 69 exploratory drags was made between Cape Beale, Vancouver Island, and Point Grenville, Wash. The bottom in that area is generally free of snags, and in most areas sampled, consists of green mud and sand. Best catches were made between LaPush and Point Grenville, Wash.

Of 29 drags made in that area during one month, 11 drags caught heads-on pink shrimp at rates ranging from 400 to 1,500 pounds an hour—averaging about 200 to the pound. The shrimp in the area were most concentrated between 61 and 70 fathoms, and drags made in shallower or deeper water were not commercially productive.

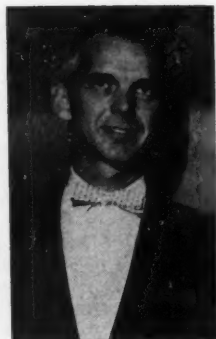
Moderate catches of ocean pink shrimp were made during May about 20 to 30 miles off Cape Flattery. Six drags made in that area, at depths ranging from 68 to 107 fathoms, resulted in heads-on shrimp at catch rates of 233 to 650 pounds an hour. Average shrimp counts ranged from 102 to 135 heads-on shrimp per pound. Other drags made in the same general area and depth range were less productive. The area west of Cape Flattery appeared to offer a potential for commercial use, although catches contained considerable amounts of fish.

One drag made west off Cape Beale in 64 to 66 fathoms resulted in a catch of 200 pounds of ocean pink shrimp that averaged 107 count, but other drags in the area did not produce commercial quantities of shrimp. Thirty

(Continued on page 26)

An excerpt from material prepared by Dayton L. Alverson, chief North Pacific Fisheries Exploration and Gear Research; Richard L. McNeely, electronic scientist; and Harold C. Johnson, fishery methods and equipment specialist; Bureau of Commercial Fisheries.





Elected at Oyster Convention, left to right: David H. Wallace, secretary-treasurer; G. I. Lore, vice-president; William R. Woodfield, president of Oyster Growers and Dealers Association; L. Eugene Cronin, president; John B. Glude, secretary-treasurer, National Shellfisheries Association.

## 52ND ANNUAL OYSTER CONVENTION HEARS

# Need For Co-operative Research Effort, Pond-Raft Culture, Pesticide Control

Cooperative efforts among industry, the States and the Federal Government must be continued to meet and solve the problems facing the oyster industry," Arnie J. Suomela, Commissioner of Fish and Wildlife, U. S. Department of the Interior, told the 52nd Annual Oyster Convention. The joint meeting of the Oyster Growers and Dealers Association of North America, the National Shellfisheries Association, and the Oyster Institute of North America took place at the Emerson Hotel, Baltimore, Md., July 31 through August 3.

Industry, technical, and general sessions considered pond culture and chemical pest controls. Other topics of interest covered at the meeting were law as it affects the industry, the European oyster in Maine, oyster mortalities, maximum yield of the sea scallop fishery, and predator control.

William R. Woodfield, Woodfield Fish and Oyster Co., Galesville, Md. was elected president of the Oyster Growers and Dealers Association. Vice-presidents voted into office were G. I. R. Lore, J. C. Lore and Sons, Solomons, Md. and Lee J. Wiegardt, Wiegardt Brothers, Ocean Park, Wash. David H. Wallace, director of the Oyster Institute, was re-elected secretary-treasurer.

The National Shellfisheries Association re-elected L. Eugene Cronin director, Maryland Department of Research and Education, Solomons, Md. as president; Philip A. Butler, director, biological laboratory, Bureau of Commercial Fisheries at Gulf Breeze, Fla. as vice-president and John B. Glude, chief Shellfish Section, Bureau of Commercial Fisheries, Washington, D. C. as secretary-treasurer.

"Research work by various State and university groups has been very instrumental in furthering the work being done on shellfish," Suomela said. "Contracts to the Oyster Institute and other private organizations have also produced answers to many of the problems that have come up."

"The Department of the Interior has, through the use of quality standards and the Department's shield of quality, improved the attitude of the consumer. The market research and the consumer education programs of the Bureau of Commercial Fisheries are helping with the marketing problems which are always related to competition from other goods. Specifically, we have helped move shrimp during the past few months and now we are doing whatever is possible to aid in the marketing of

scallops. Our exploratory program has helped locate and develop new fishing areas, the latest being a large scallop bed off our south coast.

"The Fish and Wildlife Service has definite long-range interests and responsibilities to assist State agencies and the industry in solving problems of a national or regional nature. This responsibility is best fulfilled, we believe, by establishing, staffing, and maintaining Federal laboratories at strategic locations. Our shellfisheries laboratories at Boothbay Harbor, Me.; Woods Hole, Mass.; Milford, Conn.; Oxford, Md.; Beaufort, N. C.; and Gulf Breeze, Fla. are good examples."

## Effect of Pesticides on Seafoods

Chemical compounds used to control farm pests may have an adverse effect on the country's seafood supply, a marine biologist warned. Dr. Philip A. Butler, director of the biological laboratory of the Bureau of Commercial Fisheries at Gulf Breeze, Fla., presented a report on an intensive 14-month study of the effect of pesticides on marine life.

Butler pointed out that chemical companies are turning out one or two new pesticides each week, specifically for the control of farm pests. "They are performing a wonderful service for agriculture," he said, "But what many persons forget is that when the farmer gets through with these chemicals they are washed down brooks and rivers into estuaries."

And, Butler emphasized, at least 80 percent of edible fish and shellfish spend some part of their lives in estuaries. In the early stages of the program to study the effects of these pesticides "hurried tests, using highly concentrated substances" have been made to determine their effects on marine life. Later tests, he said, will study results of introducing lesser amounts of the chemicals to determine their effects under a wide variety of conditions and in different locations.

"After more than a year of the intensive research, Dr. Butler continued, "we have hardly scratched the surface." He said that the research program, for which he is the national coordinator, is being conducted from Florida to Alaska by the Bureau of Commercial Fisheries, with cooperation of all interested agencies, states and private industries.

Butler said that "chemical companies have been more

than generous in giving us samples of products in production, as well as those going into production". But he said the companies, despite their large research facilities, realize that the effects of the chemicals may differ in different locations.

### Pond Oyster Culture

Producing oysters in pond cultures was described to the Convention as the best method for bolstering Maryland's shellfish industry, as George M. Staples 3d, a chemical engineer of Crisfield, outlined a controlled experiment he has been conducting for two years in small ponds near his home.

Staples said an adequate modern oyster production process for Maryland must include control in the form of low mortality, good growth and shape, protection from storms and theft and a cropping time of two years. "The only established method that might embrace these features," he said, "is pond culture".

Although the method is not widely known, it is highly controllable and suited to statistically designed experimentation, Staples said. Contrary to common opinion that oyster research is always expensive, the speaker said, twelve oyster ponds costing \$1,200 can be operated for three years at a cost of about \$5,000.

Staples explained the budget for three years of work, including seeking advice from authorities here and abroad, building the experimental facilities, and stocking the ponds with oysters, might best be described as a "short shoestring." He said the facility currently includes 100-square-yard ponds, built in a peat marsh near Crisfield and ranging in depth from about 3 to 6 feet. Six of the ponds are non-tidal and might be called stagnant, while the other six are tidal ponds with a maximum of about 33 percent exchange ratio during the period of maximum high tides.

Test oysters, Staples declared, are held on 2½ by 3 foot wooden trays with slatted bottoms, suspended by a 3-leg nylon bridle below a 9-ft. long wooden davit. The arrangement allows one bushel of oysters to be positioned 3 to 4 feet from the pond's near vertical side wall at any depth and provides for easy removal by one man for periodic inspections.

Variations in the current test series, he continued, include pond type (tidal or non-tidal), pond depth (3 to 6 feet), tray depth from surface (1 to 3 feet), and pond fertility (artificially fertilized or non-fertilized). Data recorded includes total weight and size increases, average pond water temperatures and salinities and oyster mortality. The first pond, handdug, served to prove that a non-tidal marsh pond provided a suitable environment for juvenile and mature oysters held on a float, Staples concluded.

### Raft Oyster Culture Studies

Studies of the growth and survival of raft grown oysters were conducted in Oyster Pond and Oyster Pond River, Chatham, Mass. from 1957 through 1959. An account of the maturity of oysters grown by this method from seed to market in two years was given by William N. Shaw, Bureau of Commercial Fisheries, Woods Hole, Mass.

The seed oysters were supported off the bottom by a log raft for one year and then planted on the bottom for an additional year. At the end of this period the majority of the experimental oysters had grown to marketable size. Approximately 17.4 percent of the oysters died while attached to the raft and an additional 26.4 percent perished while on the bottom.

Under conventional methods of cultivation the Cape Cod oysters reach marketable size in 4-5 years. The mortality rate among oysters left on the bottom was reported to be as high as 90 percent in two years. The development of raft culture on a self sustaining basis might be a possible solution for bolstering the oyster industry of Massachusetts and for rational utilization of potential oyster resources of the state.



Unloading oyster dredger at dock of J. H. Miles & Co., Norfolk, Va. Rubber belt conveyor carries oysters into the packing boat.

### Chemical Control of Predators

Presenting a progress report on chemical methods of control of molluscan enemies, V. L. Loosanoff, C. L. MacKenzie, Jr., and H. C. Davis of the Bureau of Commercial Fisheries, Milford, Conn. told Convention delegates that several combinations of chlorinated oils, either alone or with other chemicals, have been found useful in controlling shellfish enemies.

Most gastropods were stopped by chlorinated benzenes alone. To be effective in controlling starfish and crabs additional compounds may be needed. Barriers made of chlorinated oils and sand retained their strength in the laboratory for 14 months. In the field, such chemical barriers remained intact for at least 10 months.

In the laboratory, many forms set on the walls and bottom of troughs only a fraction of an inch from the barriers. In the field, clams and oysters that were placed directly on the barriers were alive and showed good growth 85 days later. Oysters placed on such barriers in Long Island Sound were still alive 9 months later.

Dipping oyster shells in oils before using them as cultch did not stop oyster larvae from setting on them, but in some instances it prevented drills from attacking young oysters. Dipping recently set oysters in oil to protect them is not recommended. A search of literature as well as these experiments, indicates that chlorinated oils are relatively safe to animals not touching them.

A practical chemical method for killing oyster competitors was described by Clyde L. MacKenzie, Jr., of the Bureau of Commercial Fisheries in Milford, Conn. MacKenzie explained it as a practical and inexpensive system whereby mussels and many other competitors of oysters can be effectively killed without harming the oysters.

It consists of simply dipping a full dredge or individual bushels of bottom material containing oysters and various competitors, in a vat of a solution of chemical and then storing the treated material in the air for a period of a few minutes to 8 hours, depending upon the competitors involved.

The chemicals which will kill competitors handled in this way are the dye Victoria Blue, copper sulfate, and common salt. Every competitor, except barnacles and jingles and many predators can be killed by this method. If bottom material is dipped manually, a single man can dip more than 25 bushels an hour. Treatment of 100 bushels of bottom material requires about 25 gallons of solution.

(Continued on page 32)

# Changing Great Lakes Fisheries Require New Fishing Methods, Research

The composition of the commercial fish catch in the United States portion of the Great Lakes has changed in the past ten years, in that species which used to be underutilized or undesirable are now being harvested in increasing amounts. Where formerly most fishermen took small quantities of high-priced fish, many now must take large quantities of low-priced species.

The change is the result of new biological and economic factors affecting the fisheries such as the decline in the lake trout and whitefish populations which can be attributed to the predatory sea lamprey. The decline in walleye and blue pike populations in certain areas is the result of the failure of reproduction for a rather extended period due to unknown causes. The loss of these major species has forced the fishermen to obtain much more of their income from formerly little exploited species for which markets are now developing.

The equipment in use in the area is not entirely satisfactory for producing low-priced fish. Most of the nets used require hand labor to set and to remove the fish because the gear was designed for taking small quantities of more expensive fish. However, the same gear is uneconomical when used to large quantities of low-priced fish.

## Introduction of Trawling

The recent introduction of trawl netting on the Great Lakes could bring stability to the commercial fisheries in that region through increased production, in the opinion of many. On Lake Erie, the interest and activity in trawling for smelt, which has arisen within the past year, has begun to spread to the taking of other species, and Canada has been encouraging trawl operations in her side of the lake.

Within the last two months, Michigan's conservation department has authorized trawl nets to be used in Lake Michigan on a limited basis. Wisconsin lets a restricted number of fishermen use trawling gear through permit only, recognizing the need for this fishing method. However, the state feels there is a need for more information before wide-spread operations can begin.

At present there are substantial quantities of bloater chubs, carp, alewives, smelt, and yellow perch in the Great Lakes. Fishing with trawls has indicated that this is an economical method of profitably producing chubs and smelt. In addition, alewives may be available for profitable seining operations during the warmer months in some localities.

If the producers are able to convert to more efficient operations and the volume of low-priced fish can be increased as the costs of production are reduced, many market outlets are available. Pet food manufacturers and mink ranchers would take many millions of pounds. Fish-meal plants could be established if the volume was sufficient at a low enough price. Such industries would be important to the Great Lakes states as sources of tax revenue and jobs, and to the fishermen as a stable market.

## Chubs, Carp, Smelt, Perch Up 150 Percent

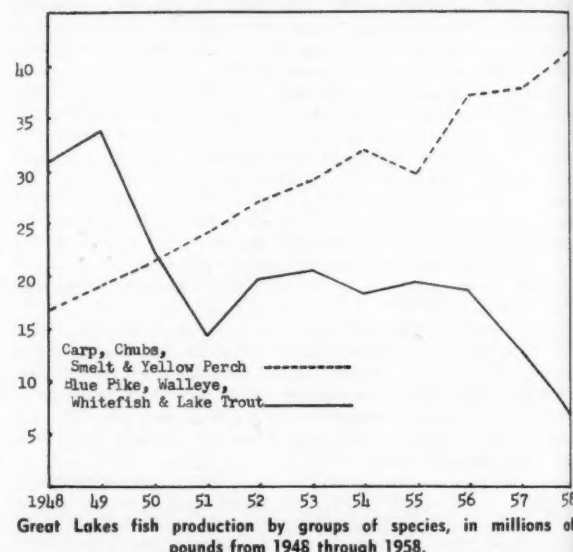
Since 1948, the combined production of lake trout, whitefish, walleyes and blue pikes has declined from over 30 million pounds to less than 7 million pounds annually.

During the same period the combined catch of chubs, carp, smelt and yellow perch has increased by 150 percent, or to more than 41 million pounds. The change in the catch composition has resulted in a loss in income to Great Lakes fishermen. The average price of all fish produced has been reduced by 3 cents per pound in the

past ten years, while the lower priced species have been making up an increased portion of the total catch by weight since 1948.

Chubs have been under increased fishing pressure since the decline of lake trout in the upper Great Lakes. The lake trout producers turned to chubs as a substitute. Not only are they readily marketable as smoked fish but their numbers have increased since the chief predator, the lake trout, has disappeared. Most fishermen, however, have incurred economic losses in this fishery because of the expense of catching chubs with gill nets.

Much of the difficulty in producing chubs with gill nets comes from the many small bloaters and alewives



that fill the nets during some seasons and for which markets have not been developed. The expense of the hand labor needed to remove the undesirable fish often makes the production of chubs uneconomical.

The chub production has remained relatively stable since 1952 as the result of high costs in production, and marketing problems, despite the availability of large stocks of chubs.

The increase in landings of yellow perch has occurred to replace walleye and blue pike. The catch of yellow perch has increased until it more than doubled the production of 10 years earlier. It is possible that the production of perch could be further increased, although consumers do not entirely accept perch as a substitute for other species. As a result, marketing problems develop during periods of heavy perch production; these in turn cause a decline in prices and a lowering of the production effort.

Carp sales have gone up because many fishermen market carp caught during operations for other more valuable species. There is little profit in fishing for carp alone because their price usually averages about 4 cents per pound. This is below the minimum price required by most producers with which to break even under present methods of production.

Smelt landings are up because of increased availability and the use of smelt as a mink food. The severe die-off of these fish which occurred in 1942-43 reduced the popula-

(Continued on page 26)

By Keith D. Brouillard, commodity industry economist, and Robert G. Personius, fishery marketing specialist, for the Bureau of Commercial Fisheries at Ann Arbor, Mich.



## SOUTH ATLANTIC

### Joint Committees To Solve Maryland, Virginia Problems

Three Committees were appointed recently at Annapolis, Md. to investigate and recommend steps for curbing Maryland's and Virginia's seafood problems in the Chesapeake Bay. On October 6, the two states will meet for a further discussion of the problems and to hear recommendations from committees.

A meeting at Annapolis arranged by Dr. H. C. Byrd, chairman of the Maryland Tidewater Fisheries Commission and Milton T. Hickman, chairman of the Virginia Commission of Fisheries, attracted commissioners and fish scientists from both states, industry representatives, and members of the US Fish and Wildlife Service.

Byrd appointed William P. Ballard, Norfolk, Va. oyster planter and packer, to head a commission on oysters; George Harrison of Tilghman, Md. to head a group on fish and crabs; and James Engles, Fish and Wildlife Service, to head a committee to coordinate laboratory efforts of the two states.

Byrd and Hickman said that the purpose of the meeting was to pinpoint the problems and to get suggestions about what should be done. Virginia Governor Tawes said that he would "back up" whatever they agreed upon. The Governor said in effect that he was sure that Maryland and Virginia, by pulling together can work out some fine programs for both states.

The group also discussed the oyster problem, spent some time on the subject of foreign competition in the fisheries industry, and discussed a coordinated laboratory effort for both states.

### To Make Maryland Coastal Survey

A dual purpose survey of the Chesapeake Bay was scheduled to start last month as the U. S. Coast and Geodetic Survey announced it would undertake a 1,500 mile shoreline survey in cooperation with the Maryland Department of Tidewater Fisheries.

The Coast and Geodetic Survey Director said that the project will provide 37 special shoreline maps for Maryland to assist in their study and development of fishery resources, especially oyster cultivation. In addition, the Survey will revise about 80 of its own large scale base maps of the Bay with the aerial photography and field data thus acquired. Both Maryland and the Federal Government will share the expense of this project, which is expected to cost about \$120,000.

### Oyster Dredging, Patent Tonging Suggested For Potomac River

The possibility of opening the Potomac River to restricted oyster dredging and patent tonging was broached recently by Dr. H. C. Byrd, chairman of the Maryland Tidewater Fisheries Commission.

He suggested that the Seafood Committee of the Legislative Council study the question with the aim of making a recommendation on it. The Committee headed by Delegate Egbert L. Quinn, of Somerset is charged with studying and revising existing seafood laws with the aim of rehabilitating the industry.

Byrd put the idea forward during a committee discussion of methods reviving the State's oyster industry. The question of oyster taking in the lower Potomac came up during a discussion between Dr. Byrd and Senator Harry T. Phoebus over methods of increasing production.

Senator Phoebus claimed there were enough oysters in the river to supply the State's watermen, if it were opened to dredging and patent tonging, but that the Fisheries Commission was hoarding them. Dr. Byrd flatly



"MISS MARY ANN", Florida shrimp trawler owned by Robert A. Wilson of Tampa is powered with a 152 hp. D-342 Caterpillar Diesel and is equipped with Onan generator, Ritchie compass, a 50 x 34 4-blade Columbian propeller, and a Walter Clean-Flo keel cooler, and was built by Diesel Engine Sales, Inc.

denied the charge and said that on a recent tour of the area, he had been told the oysters would last only 30 days of unrestricted dredging. At present oyster taking in the Potomac is limited to hand tonging.

### Virginia Conducting Study Of Crab Movements in Rivers, Bay

Frank J. Wojcik, directing a crab tagging program for the Virginia Fisheries Laboratory, Gloucester Point, reports that by the end of September, 400 crabs bearing bright red disks will have been released in the York River every two weeks. Anyone recovering such a tag should return it to the Virginia Fisheries Laboratory with information as to when and where it was caught and the gear used. A twenty-five cent reward will be paid and a letter sent telling when and where the crab was released.

"We are interested in learning the movements of crabs within the rivers and Bay itself," Wojcik reports. "Last August we released 2,000 tagged crabs in the James River, Back River, York and Rappahannock Rivers; of 37 tags returned by the winter dredge fleet, only two came from crabs tagged in August. We would like to know more about where the crabs caught in that fishery originate."

Of the crabs released in the York River, 25% were caught by crabbers. This would indicate that, from this area, about one-fourth of the adult female crabs in the York River are caught.

Scientists depend on the help they receive from commercial fishermen in estimating the numbers of crabs and fishes in Virginia and their movements. This cooperation has been exceedingly good in the past; dealers have helped by collecting tags from the crabbers who sell to them.

### To Study Virginia Seafood Laws

Del. Russell M. Carneal of Williamsburg has been named to head a special commission to study and revise Virginia fish, oyster and shellfish laws.

The commissioners will hold four public hearings before September at which formal proposals for law changes will be made. The hearings, dates for which will be set later, will be in Gloucester County and at Warsaw and Norfolk on the Eastern shore.

Carneal said the hearings would enable people in the seafood industry to present their ideas on new statutes and on which present laws conflict or need revision. The commission is to report to the State Commission of Fisheries, the State Code Commission and the Governor by September 1, 1961. Final recommendations are to reach the General Assembly by January 1, 1962.

## Chipman Named Radiobiology Consultant For Fish Bureau

Dr. Walter Chipman, Chief, Radiobiological Investigations at the Bureau of Commercial Fisheries laboratory, Pivers Island, N. C. has been selected to fill a new position with the Bureau as liaison officer on atomic energy for the division of biological research. One of his first assignments is planning a cooperative program with the Public Health Service and the Atomic Energy commission for radioactivity surveys in harbors and estuaries of the United States.

It is anticipated that the Bureau of Commercial Fisheries will assume a more active part in the approval and licensing of proposed nuclear installations and waste disposal operations. A review of requests for such operations will be a function of the new operations. Chipman will also be responsible for coordinating the radiological research of the Bureau at various laboratories.

Dr. T. R. Rice of Morehead City, has been selected to fill the vacancy of chief, Radiobiological Investigations created by the promotion of Chipman.

## Chesapeake Crab Shortage To End

The shortage of Crabs which has bothered Chesapeake Bay crab fishermen and producers of crab meat since January 1960 will end by mid-summer, scientists at the Virginia Fisheries Laboratory, Gloucester Point reported.

The head of the crab research team at the Laboratory declared that at least three times as many soft and peeler crabs were caught in June of this year as were landed in the same period in 1959.

"Soft and peeler crabs should remain abundant through August", the researcher predicted, and crab potters will have above average catches throughout August and this fall; while the winter dredge catches will be larger than usual in 1960-61. Hard crab catches by pots and peeler catches with scrapes and fykes should remain high during spring and early summer 1961, barring the unforeseen."

## Philadelphia Firm Opens Warehouse

Recently the Liberty Fish Co. of Philadelphia, Pa. formally opened its new half-million dollar seafood warehouse at 3101 So. Lawrence St. in the Philadelphia Food Distribution Center. The new unit, housing a 120,000 cubic-foot freezer, is a one-story brick building and is located at Packer Ave. at Lawrence St., a short distance from the Food Center's fish market, where the company's office headquarters are located.

The new warehouse has a capacity of 1,500,000 pounds of frozen seafoods. Liberty Fish Co. was founded in 1908 by the father of Fred, Lewis, Samuel and Stanley Goldstein, all four of whom are presently active in the management of the firm.

## Fish and Shellfish Increases Recorded in Virginia Catches

Fish production in the Hampton Roads area for June 1960 amounted to 620,000 lbs. as compared to 594,000 lbs. for June 1959. In the Lower Northern Neck for June 1960, the landings amounted to 93,000 lbs.—somewhat lower than June 1959.

In the Hampton Roads area scup (porgy) for June 1960 amounted to 190,000 lbs. in contrast to 0.5 lbs. for June the year before. Spot for June this year amounted to 120,000 lbs. compared with 37,000 lbs. for June 1959. In the Eastern Shore area, production for June 1960 was 140,000 lbs. to top 110,500 lbs. of the previous year.

During the first five months of 1960, landings of fish and shellfish at Virginia ports amounted to 59.1 million pounds with a value of \$8.4 million. Scup or porgy was the leading species taken with 11.3 million pounds. Alewives were second with 10.7 million pounds and menhaden third with 8.2 million pounds, followed by oyster meats with 7.7 million pounds. These four items made up 64 percent of the 1960 five-month production.

## Pound Net Catches Gaining

Isaac Fass, Inc., Portsmouth, Va. expects a good pick-up in spot and croaker production, with the big season underway for pound nets and haul seines. Bay fish catches have shown improvement in recent weeks after a scarcity earlier in the summer. The haul seines will be in full production with Ocean View spot in September.

Draggers have been getting normal supplies of porgies and fluke, with fluke now being more plentiful. The Sol Fass landed a record trip of 27,000 lbs. of scallops last month.

## Georgia Landings Up 33 Percent

Landings of fish and shellfish at Georgia ports during May 1960 amounted to 1.8 million pounds, representing a gain of 33 percent compared with the same month of last year. Blue crabs made up 88 percent of the month's total catch and were more than sufficient in quantity to keep the processing plants operating at full capacity. Compared with the same month of last year, the May blue crab catch showed an increase of 33 percent.

Shrimp catches in the Central Section were better than average during May ranging from 100 to 300 pounds (heads-off) per day for each trawler.

Fish and shellfish landings at Georgia ports during the first five months of 1960 amounted to 6.6 million pounds to show an increase of 35 percent compared with the same period of last year. Blue crabs made up 81 percent of the five-month total.

## Rodgers Is New Chairman of The North Carolina Fisheries Committee

D. G. Bell, Morehead City, N. C., has been succeeded by Eric Rodgers, Scotland Neck, as chairman of the state Commercial Fisheries Committee.

Rodgers, publisher of the Scotland Neck Commonwealth, has served six and a half years on the Board of Conservation and Development, was one time assistant director of the Conservation and Development Department and has served as chairman of the commercial fisheries advisory board. He was instrumental in completely reorganizing the commercial fisheries regulations several years ago.

## South Carolina Landings Up 17 Percent

Landings of fish and shellfish at South Carolina ports during May 1960 amounted to 697,000 pounds—and increase of 17 percent compared with the same month in 1959. Hard blue crabs (586,000) comprised 84 percent of the month's total landings for a gain of 56 percent compared with May of last year.

During the first five months of 1960, landings of fish and shellfish at South Carolina ports totaled 4.4 million pounds for an increase of 35 percent compared with the same period last year. Hard blue crabs (2.9 million pounds), oysters (936,000 pounds), and catfish (144,000 pounds) accounted for 92 percent of the total production during the five month period.

## New Method To Shuck Callico Scallops

The Bureau of Commercial Fisheries has come up with a simple and economical means of shucking the small callico scallops recently discovered off the Florida Coast. The scallops are placed in warm water, which relaxes the shellfish, and the shell is split. The viscera are pulled out by vacuum pump, leaving the "eye muscle" to be cut out by the workers.

## Taxes Move Shrimpers Out of Tampa

R. R. Walden, Hillsborough County Tax Assessor, said recently that Tampa shrimpers started registering their boats in other Florida and out of State ports two years ago, to avoid paying an average of \$120 a year taxes for their boats. Fort Myers assesses boats so that the owners only would have to pay \$40 or \$50 per boat while Texas has a flat \$25 a year tax for shrimp trawlers.

## GULF OF MEXICO

### Survey Alabama Fisheries To Determine Industry's Status

An economic survey of the seafood industry was begun last month by the Alabama Seafood Division to determine the true economics of the seafood industry in that State and the influence of the industry on the general economic structure of the state.

George Allen, chief of the Seafood Division, said Division officers conducting the survey have found some people in the industry reluctant to divulge information. He emphasized that all the information obtained is "strictly confidential" and that no names of individuals or companies are connected with the data.

The seafood chief urged cooperation, but said the individual or companies are not required to give the information. "It's strictly a voluntary project," said Allen, "we are trying to get information to have something concrete on which to base our future programs and legislation." The survey is covering all phases of the seafood industry, including boats, processors, retail outlets and any other business or work connected with the industry.

Allen said that, in the past, figures on national and state levels have been used to compare seafood resources and economic value with those of other resources. "Those figures are ridiculously low," Allen said. He added, "We feel the results of this current survey will show twice as many people and 10 times as much money directly connected with the seafood industry than is generally believed and previously reported."

The seafood chief charged that past reports on the industry's economy have been made by agencies and people not connected with the seafood industry, causing discrepancies in estimates of the industry's economic value.

Information is being sought on expenses, payrolls, cost of equipment, maintenance, fuel, rigging, overhead, income and any other item connected with the industry. Boats, individual shops, workers, processing plants, transport facilities, retail outlets and related businesses are being surveyed, Allen said.

Department officials said one use for such information would be an aid to getting seafood legislation passed. They said if the legislature and public is more aware of the industry's economic importance it will be a big help in future programs to develop and expand the industry.

### Will Dredge Alabama Channel

Lloyd Smith, Bayou La Batre, Ala. Chamber of Commerce president, said that efforts to get the Bayou La Batre channel dredged to a depth of 12 feet had been very successful. He said all preliminary plans have been completed and the project "is now in Washington where we are receiving help from the Alabama congressional delegation."

Smith said the deepened channel will be a big step toward acquiring seafood packing plants here. It will be a great help to the seafood industry of the Bayou-Coden area as a 12-foot channel would enable large boats to navigate the bayou.

### Marketing Specialist Named In Louisiana

The Bureau of Commercial Fisheries has announced the appointment of George W. Snow as Supervisory Fishery Marketing Specialist at New Orleans, La. Snow will be in charge of all the Bureau's Market News and Statistics programs in the Gulf and South Atlantic States.

He succeeds Charles H. Lyles who has been promoted to the position of Assistant Chief, Branch of Statistics,



THE SHRIMP "KAMRON K" was built by Diesel Engine Sales, Inc., St. Augustine, Fla., for O. A. Kirkconnell, Jr., of Brownsville, Tex. The 67' boat is powered by a 220 hp. General Motors 6-110 engine and is equipped with Southland batteries, Plymouth cordage, Raytheon Fathometer, Stroudsburg hoist, and is finished with Woolsey paint.

Bureau of Commercial Fisheries, Washington, D. C. Snow has served as Supervisor of Branch of Statistics in the states of Alabama, Mississippi, and Texas since 1955.

### Expect Good Texas Shrimp Landings

Shrimp landings at Texas ports show good prospects for a fall harvest between August 15 and December 15. All shrimping during July was restricted to bait boats. Offshore shrimping was closed in a 10½-mile strip from the Gulf shoreline, but the area was reopened recently.

A total of 1,820,000 pounds of headoff shrimp were landed. Mixed white and brown dominated northern catches, with browns and a sprinkling of pink at southern ports. Sizes were small for the season, averaging 36-42 count.

### Aransas Pass Has New Crab Plant

Aransas Pass, Tex. now has its second crab processing plant to begin operations since last February. The new plant is named the Texas King-O-Crab Company. It was organized by Gene Webster and Barney Sanders, and is located on Conn Brown Harbor.

The processing room is air-conditioned with complete modern facilities. About 40 employees are now employed. Approximately 40 area boatmen are operating crab pots and traps to produce an average of 7,000 pounds of blue crabs per day.

### 1960 Aransas Pass Shrimp-O-Ree

Ed Poling will serve as first President of Shrimp Clan, Inc., the Aransas Pass Shrimp-O-Ree's guiding organization. Other officers elected are Melvin Beyer, vice president; Mrs. Neil Hughson, treasurer; and W. T. Peterson, secretary.

This year's program includes all of last year's events plus a fishing contest. The latter will be limited to adjoining bays and will last for one day only. Prizes will be awarded for best catches in several divisions.

The 1960 Shrimp-O-Ree will open September 2, with a beauty review and a street dance. Other events include a cyclecade, a street parade, a shrimp boil, and a concert by the Fourth Army band. A horse show will be held. Miss Shrimp-O-Ree will be selected and the coronation pageant and ball will follow.

Conn Brown Harbor will be the setting for the final events, which will feature an air-sea rescue demonstration, water skiing, and the second annual review of the Coastal Bend Command of the First Flotilla of the Texas Navy.



## Few Other Fish Taken In Gulf Menhaden Catches

Initial findings from a study of fishes other than menhaden taken by menhaden purse seiners in waters around the mouth of the Mississippi River and in the Mississippi Sound show that more than 97 per cent of the sampled catch were menhaden.

Samples were taken from catches which totaled nearly 2 million pounds, the equivalent of one-fifth of one boat's seasonal catch. The estimated annual catch of fishes other than menhaden, made by the Gulf menhaden fishery, is about 15 million pounds per year. Over 500 million pounds of menhaden are caught each year between April and October.

This is the largest fishery of the Gulf, according to researchers and occasionally concern has been expressed about the numbers and kinds of other fishes caught along with menhaden. The purpose of the study was to determine the catch composition of landings at Mississippi ports.

Most of these catches were made in Louisiana and Mississippi waters. Except for the menhaden, striped mullet appeared more often than any other fish in the samples taken, partly because sets were made on schools of this species which had been mistaken for menhaden. Otherwise, the mullet was not common in the catches.

Other fish noted in menhaden catches were croaker, spot, gizzard, shad, gafftopsail, hardhead catfish, white trout, butterfish, sand trout and pinfish. Scientists at the Gulf Coast Research Laboratory, Ocean Springs, have been conducting the studies. The work was financed by the Bureau of Commercial Fisheries.

Dr. Gordon Gunter, who is director of the research laboratory, said recent studies have discovered several forms of marine life that have never been recorded on the Gulf Coast or in the Gulf of Mexico.

## Gulf Landings Rise in First 6 Months

Landings of seafoods for the first six months of 1960 in the Gulf states showed an increase over those for the corresponding period of the previous year.

Landings of shrimp, heads off, for 1960 were 30,340,000 lbs. comparable to 28,800,000 lbs. in 1959 for a gain of 6 percent. Edible finfish showed 5,300,000 lbs. to top 1959's 4,520,000 lbs. for an 18 percent rise.

Oysters during the first six months totaled 520,530 bushels opposed to 340,000 bushels or a 53% increase. Blue crab catches for the first half of 1960 were 5,250,000 lbs. opposed to 4,500,000 lbs. for the first six months of 1959, or a 13 percent hike over the same period in 1959.

## Mississippi Seafood Commission Inspectors Assume Duties

The Mississippi Marine Conservation Commission swore in its new chief inspector and assistant chief inspector last month at a special meeting in Biloxi. The inspectors were appointed recently by Governor Ross Barnett. George Williams, Biloxi, is the new chief inspector, succeeding Clarence Canaan who remains with the commission as an inspector, and Claude A. Moody, Pascagoula.

Commission members also adopted an ordinance closing the waters between Deer Island and Ocean Springs because of the presence of small shrimp in the area.

The new ordinance prohibits the catching or taking of shrimp from the waters north of a line from Biloxi channel beacon Number 10 to the east end of Deer Island to Bell Fountain Point from July 8 until July 18. The ordinance doesn't apply to live bait dealers.

Recently, a barge loaded with 3000 barrels of oyster shells was sent to Bay St. Louis for planting bringing the number of shells planted by the new commission to 16,000 barrels.

## PACIFIC COAST



TUNA-SALMON BOAT "WESTERN SKIES" owned by William Anderson, Edmonds, Wash., is powered by a 165 hp. General Motors engine. She has a 38 x 27 Columbian propeller and 3:1 Twin Disc reduction gear. Also included in the equipment are Willard batteries, Bendix depth sounder, Northern radiotelephone, Danforth anchor, and Mustad hooks. She uses RPM Delo lube oil.

## New Fishing Areas Found Off Washington Coast

Persistent research has opened five new fishing spots to trawlers off Washington and Vancouver Island. This was reported recently by Fred Wathne, project leader for the recent eight-week study by the Bureau of Commercial Fisheries on the research vessel *John N. Cobb*.

Target for the cruise was a spoon-shaped section of ocean measuring about 3,000 square miles, in the middle of existing commercial dragging grounds. Fishermen had avoided this area because the bottom is strewn with large boulders, Wathne said.

Fishermen, suspecting that the rocky bottom hid good fishing grounds, requested the survey. The researchers surveyed the area by cruising over sections of 100 square miles at a time with an advanced-type echo sounder. The sounder plotted the bottom characteristics. Then the boat dragged with trawl gear.

Researchers were able to plot six sections in the hitherto-avoided zone where trawlers could find fish without fouling their nets. Species were Pacific Ocean perch, snapper, petrale sole and Dover sole. Altogether, the explorations have opened 125 square miles of new fishing.

## Washington Scientists Get New Posts

Richard T. Pressey, supervisor of research, Washington Fisheries Department, has been named as a fisheries management biologist for the United States Fish and Wildlife Service on the Columbia River. He had been with the State Fisheries Department for 12 years and held his top research post since 1958.

Another Department man, Dr. Harvey C. McMillin, aquaculturist for the Fisheries Department, is going to Chile to help promote that country's fisheries with the United States International Cooperation Administration.

## Call Meeting on Fisheries Problems

The Washington and Alaska congressional delegations were scheduled to meet recently with the Undersecretary of State, to discuss North Pacific fisheries problems. Sen-

ator Warran G. Magnusson said the possibility of negotiating a new agreement with Canada was to be one of the subjects discussed.

Relations between the United States and Canada on fisheries matters were brought to the fore by the recent failure of the Conference on Law of the Sea at Geneva to reach agreements on territorial seas and fishing rights. The new fisheries agreement between Russia and Japan and the effect it may have on American fisheries also will be discussed.

## Mains Heads Washington Fishery Research

Edward M. Mains has been named supervisor of the research division of the Washington State Department of Fisheries, Milo Moore, Fisheries Director, announced recently. Mains has been with the state fisheries agency for the past 10 years, working on pollution and salt water rearing investigations and fisheries engineering as related to power dams.

## Bristol Bay Red Salmon Runs High

Alaska lifted almost all regulations on Bristol Bay (Alaska) red salmon last month as enough salmon to assure new generations escaped into the streams to spawn and die.

Gill-netters were reported taking 500 and 600 fish at a set. With the regulations lifted, they were free to fish 24 hours a day, seven days a week. Eight million fish were counted by the Alaska Fish and Game Department as they moved into their native streams.

The decision to lift regulations was based on research at the University of Washington which has shown that only a certain percentage of the returning salmon are needed to perpetuate the cyclical salmon runs. Without the study, which predicted the large run, it is claimed that 5 to 7 million fewer fish would have been taken.

## Kachemak Bay Has Record Crab Catch

The catch of king crab from Kachemak Bay, Alaska through June 12 was the largest on record for the bay. During the first six months this year, 2,985,000 pounds of king crab were taken from the bay, State Management Biologist Ben L. Hilliker, reported. Last year's total catch was slightly more than 2,000,000 pounds.

## Water Purity Standards Rejected

Washington oyster growers, pulp mill operators, and Indians expressed opposition recently to adoption of water purity standards designed to curb effects of pulp mill waste upon oysters.

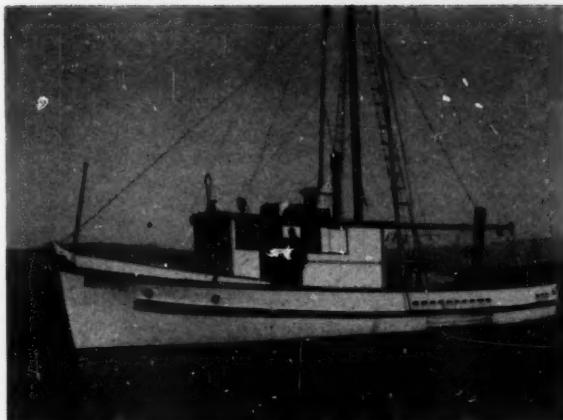
That was the report of Art Garton, director of State Pollution Control Commission, after a day-long hearing. The commission decided to study the matter further before taking any action.

Garton said most oystermen felt the regulations would permit too great amounts of sulphite waste liquor to be discharged in oyster areas. Pulp industry spokesmen, on the other hand, claimed regulations were too restrictive.

Representatives of Western Washington Indian tribes said the standards were inadequate and the subject needed more study. They said they would seek a court injunction if necessary to block adoption of the proposed regulations.

## Day Resigns Oregon Fisheries Post

Albert M. Day, who has been prominent in conservation and fisheries management on the Pacific Coast for many years, resigned last month as director of the Oregon Fish Commission. Day did not specify his reasons for resigning. Robert W. Schoning, assistant director, was chosen by the commission to succeed Day. Schoning has been with the Oregon Fish Commission since 1947.



CALIFORNIA ALBACORE BOAT "BETTY M" owned by Joe Thompson, Palo Alto, has a 28 x 38 propeller turned through Twin Disc 3:1 reduction gear by a 170 hp. General Motors engine. She is equipped with a Bendix depth sounder, Danforth anchor, Northern radio, Apelco direction finder.

## Oregon Plants 42 Million Salmon, To Supplement Natural Stocks

Oregon's salmon and steelhead releases from Fish Commission hatcheries for the first six months of 1960 totaled more than 42,000,000 fingerlings. The liberations were made, according to Ernest R. Jeffries, director of fish culture, were made from 16 hatcheries located on key rivers throughout the state as a supplement to natural fish stocks.

"All of the silvers, spring chinook, and steelhead were released as yearlings from four to six inches in length," Jeffries said. "Chums were released as unfed fry and fall chinook were fed up to 90 days to correspond with natural migration habits of these species. The silver salmon yearlings included in the stocking program were from the 1958 brood and will return as adults in the summer and fall of 1961."

"The chinook fingerlings will return to the rivers in 1962 and 1963. Steelhead normally spend one or two years in fresh water and two or more years in the ocean, and will return during the winters of 1962 and 1963," Jeffries added.

## Appoints New Members to Marine Research Committee In California

Four new members were appointed by Governor Edmund G. Brown to the California's Marine Research Committee, which fosters the development of commercial fishing in the Pacific.

The new members are Harold Cary, assistant to the president on the Van Camp Sea Food Co.; Joseph Bagdanovich of Terminal Island, president of Star Kist Foods, Inc.; Dr. Wilbert M. Chapman of San Diego, former director of the University of Washington School of Fisheries; and Lee F. Payne of Temple City, chairman of the Los Angeles County Fish and Game Commission.

## California Landings up 63 Percent

Landings of fish and shellfish at California ports during March 1960 totaled 57.8 million pounds—63 percent above March 1959. The tuna group, jack and Pacific mackerel, and dungeness crabs made up 89 percent of the month's total production.

During the first three months of 1960, landings of fish and shellfish at California ports amounted to 129.8 million pounds—a gain of 36 percent compared with the corresponding period of 1959. Yellowfin tuna and jack mackerel comprised 65 percent of the 1960 three-month total catch.

## Research Unlocks Secrets Of Bottom-Fish Movements

Dayton L. Alverson, a Seattle, Wash. fisheries scientist, has unlocked new secrets of the bottom fish that hide deep in the vast fishing waters off Washington and British Columbia.

Alverson's findings show that: Some species move up and down in the ocean like yo-yos, their timetable linked to the seasons; bottom fish may travel to specific depths to spawn, just as salmon return from far-reaching ocean journeys to spawn in the streams of their birth; the fish go as deep as 3,000 feet and the knowledge that food fish live and spawn at such depths may cause scientists to question dumping radioactive wastes in the ocean.

The study, published for fishermen by the Pacific Marine Fisheries Commission, was directed at nine species of bottom fish—English sole, Dover sole, petrale sole, starry flounder, rock sole, true cod, ling cod, black cod and Pacific Ocean perch.

Trawling grounds from the Columbia River to Dixon Entrance above the Queen Charlotte Islands were selected. Trawler captains were asked to record the depth, date and area whenever fish were caught over a three-year period. The State Fisheries Department interviewed the skippers, coded facts and figures on cards and fed the results into a computer.

Alverson discovered these basic patterns: species such as English sole and true cod move to shallow water in the summer and go deeper in winter; starry flounder and rock sole show a possible inshore movement in the winter; petrale sole move rapidly into deep water in the winter and return to the continental shelf after spawning; and Pacific Ocean perch, Dover sole and black cod move from shallow to extremely deep water in the fall and winter.

Because it is a definite seasonal movement, almost like clockwork, fishermen will need to change the depth of their gear at certain times of the year.

## Fishing Resumes as Tunamen, Canners Agree on Price

Some 1,200 fishing boats left Washington, Oregon and California ports late last month to search for tuna, after an agreement on albacore prices. The fleet had been tied up for two weeks, with between 200 and 300 boats idle in Seattle, alone.

Canners agreed to pay \$375 a ton for albacore, an increase of \$50 over the previous offer. Negotiations were conducted in California, and Bert Johnston, of Seattle, Wash. represented the fishermen.

Southern California albacore fishermen who had been refusing to sell their first catches of the season to canneries because of the arbitrary price cut, offered the tuna directly to the public for 30 cents a pound. Eight hundred tons of tuna went on sale at Fishermen's Wharf in San Pedro and Fish Harbor on Terminal Island.

In San Diego, frozen albacore were sold on consignment at five supermarkets. Wayne Smith of the Five Star Fish & Cold Storage Cooperative said the markets had agreed to sell the fish on consignment at 30 cents a pound to assist albacore fishermen unable to keep their catches aboard their vessels.

## Kemmerich Heads Pacific Fish Commission

Alphonse Kemmerich, of the Bureau of Commercial Fisheries of U. S. Fish and Wildlife Service, has been appointed executive director of the Pacific Marine Fisheries Commission with headquarters in Portland, Ore. He will succeed Milton C. James. Kemmerich has been coordinator of the Columbia River Fisheries Development Program for the past twelve years.

## International Shrimp Group Predicts Sales Increase

In 1958 dollar volume sales of shrimp in restaurants and hotels were \$19 million; in 1959 they jumped to almost \$23 million; and all figures available indicate that this figure will be surpassed by several more million in 1960, Tom Endicott, editor of Restaurant Management New York, told members of the Shrimp Association of the Americas at the Association's Ninth Annual Meeting in Mexico City recently.



L. C. RINGHAVER, president Diesel Engine Sales, Inc., St. Augustine, Fla. was recently elected president of the Shrimp Association of the Americas.

The members attended from both Mexico and the United States, with representation also from El Salvador and Guatemala. Subjects included in the General Session discussions, were: conservation, marketing, research, advertising and publicity, the AFDOUS code, and standards for raw headless shrimp.

L. C. Ringhaver, president, Diesel Engine Sales, Inc., St. Augustine, Fla., was elected president of the Association. Ringhaver is currently chairman of the board of South-eastern Fisheries Association. Other officers elected were: Manuel Zapeda, J. Roselle Clegg, Jorge Mena Ariz, vice presidents; Jorge Coppel, secretary; and Virgil Versaggi, treasurer. Hector Ferreira, immediate past president, became chairman of the board.

Endicott said that shrimp producers should modernize production and selling methods so that the price range of shrimp will create new customers. Quoting commercial food operators, he warned his audience that often "the breeding on shrimp is sometimes too much, sometimes too little"—also, "we need new recipes," "need uniform grading," "quality control badly needed," "need uniform packages."

He congratulated the National Shrimp Breeders Association on their maintaining continuous Government inspection in their plants, which guarantees uniform standards for breaded shrimp sold by Association members. Endicott spoke of the increasing labor costs which are driving operators toward more self service, portion packs, packaged foods and to "experimentation with out-sales of food specialties."

Speakers, in addition to Mr. Endicott, were Donald L. McKernan, director of the U. S. Bureau of Commercial Fisheries; L. W. Strasburger, New Orleans food technologist; Robert Ingle, director of research for the Florida State Board of Conservation; Dr. Cecil Miles, regional director for U. N. Food and Agriculture organization; Harris Magnusson, technologist for the National Fisheries Institute; R. T. Whiteleather, U. S. Fish and Wildlife Service; John J. Powell, Bureau of Commercial Fisheries; Dr. Albert Jones, University of Miami; and Pedro Mercado, Department of Fisheries, Mexico.

Murray Wheeler, the Association's director of advertising and publicity, Luis Castaneda and Jose Mora of the J. Walter Thompson Company's Mexico City office, gave a report in both Spanish and English of the results of the past year's promotion activities. Lionel Hodges, chairman of the advertising and publicity committee, pointed out that the acceleration of this program made last year's activities the most successful in the history of the association.



# New Bedford Scallops Get Boost from Third Annual Festival

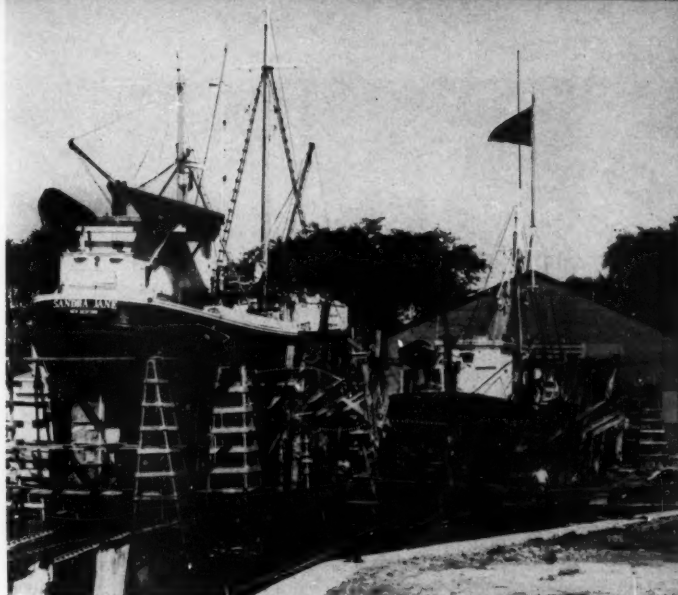
## Expanded Promotional Program To Increase Use of Scallops

An all-out effort to increase the consumption of scallops has been undertaken this year by Government agencies, industry associations and individual producers, packers and distributors. Rallying point for the varied promotional activities was this month's third annual New Bedford Scallop Festival which served over 18,000 scallop dinners in three days.

The Festival was staged by the Exchange Club of New Bedford in cooperation with the New Bedford Seafood Council. Lt. Col. Charles E. Friedman was general chairman of the festival committee, and publicity was handled by Charles E. Sharek, Jr. of the Exchange Club and Octavio A. Modesto, general manager of the New Bedford Seafood Producers Association.

The festival guests, who came from 33 states and four foreign countries, were accommodated in two tents with a seating capacity of 1000. There were four serving lines, 24 deep-fat fryers and 160 workers. Nineteen-year-old Suzanne Van Cleft was selected as the 1960 Scallop Festival Queen, and she will receive a 3-day trip to Washington, D. C.

To aid the scallop industry in marketing its products, the U. S. Bureau of Commercial Fisheries issued a special bulletin containing scallop recipes for distribution to 2300 food editors, nutritionists and dietitians. The agency prepared 25,000 bulletins featuring 25, 50 and 100-portion servings of scallop dishes for restaurants. In cooperation with Sun-Kist, 33,000 bulletins featuring the use of scal-



On the railway at D. N. Kelley & Son., Fairhaven, Mass., the 93' New Bedford scalloper "Sandra Jane" owned by Joseph Perry, and the 55' dragger "Bernice" owned by John Birknes.

lops and lemons by institutions were prepared for distribution through Sun-Kist outlets. Another 7,000 bulletins featuring scallops and lemons were issued for food editors and nutritionists.

The U. S. Department of Agriculture included scallops on its List of Foods in Plentiful Supply for August, and publicized scallops in material it distributed to the food trade.

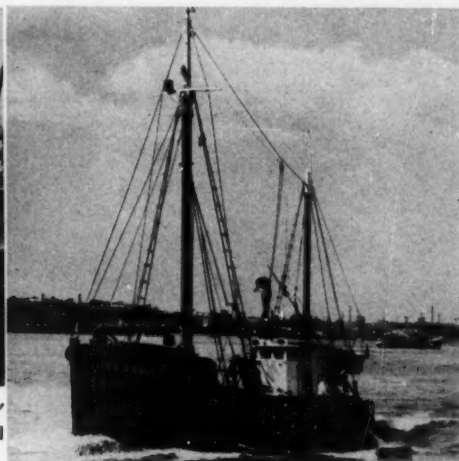
A special flyer for School Lunch and the institutional trade is being prepared for use during the Fish 'n' Seafood Parade in October. The Bureau of Commercial Fisheries home economists will feature scallops in their demonstrations before school-lunch personnel, dietitians, restaurant operators, chefs and extension agents.

New Bedford's scallop harvest for the first seven months of this year was nearly one million pounds over that of the same period in 1959. Because of heavy production for the past year, prices paid fishermen have been lower. However, with most fishing operations being on smooth bottom beds relatively near to port, and a plentiful supply which has resulted in many trips of 20,000 to 30,000 lbs., the owners have fared quite well. Savings in fuel and gear have helped to offset the lower prices.

During the early part of August, scallop prices were higher than for anytime in the past two months, and it is

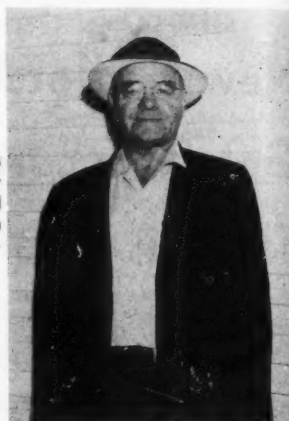


Capt. Roger Christensen, left, skipper; and Capt. Charles Tapper, owner, of the 82' New Bedford dragger "Sea Ranger", which has been repowered with a 12V-71 General Motors Diesel, sold through Hubbs Engine Co.





Capt. Hans Haram and his 82' New Bedford dragger "Viking", recently repowered with a 335 hp. Waukesha Diesel by Hathaway Machinery Co.



reported that the added promotional efforts of the Government and industry are spark-plugging increased demand which will strengthen the market.

The blackback catch so far this year of 6 million lbs. is 50 per cent over the January-July period of 1959. Fluke has increased  $\frac{1}{2}$  million lbs., totalling 3,852,000 lbs. The swordfish catch has been exceptionally high this season. Landings of 245,000 lbs. through the end of July compared to 177,000 lbs. for the same period last year, which was considered a good season. This year's fish have averaged 225 lbs. each, and the high-liner is the *Christine and Dan*, which harpooned 72 fish on one trip. Twelve boats are swordfishing out of New Bedford.

During the month of July, total landings of all edible fish and shellfish at New Bedford jumped a million pounds over the same month of last year. Yellowtails gained a million pounds to reach 3 $\frac{1}{2}$  million for the month, and scallop production showed a 2 million pound increase.

Most of the yellowtails have been caught on the Southeast part of Georges Bank, while scallops have been taken on the Southwest part and the Northern edge. It is reported that from now on there will be more scalloping on the Northern edge and Northeast Peak of Georges.

The number of scallopers in operation during July was 61 compared to 69 a year ago, but the number of draggers increased from 69 to 74. Several scallopers have changed over to fishing in recent months, and a few have been landing at Boston and Portland.

## Seafood Co-op Buying Catches

The latest development in the port of New Bedford is the New Bedford Seafood Cooperative Association, Inc., which started operations in May at the former Mutual Fish Co. plant on Union wharf in Fairhaven. The Co-op has 68 boat-owner members, and during the month of July, 55 trips of fish and scallops were taken out.

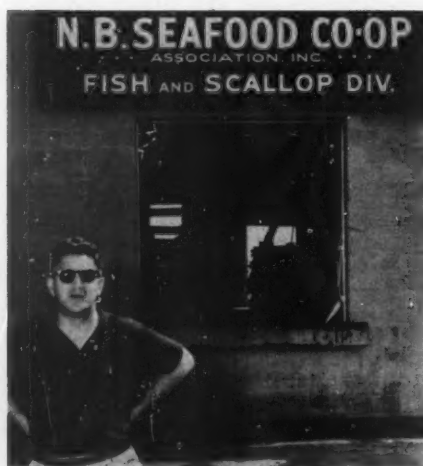
Joseph P. Boldiga is general sales manager of the Fish and Scallop Division, which recently completed a 78 x 28 addition to its facilities. One end of the new structure houses a 500-box cooler and second story offices, while the other portion provides space for unloading boats and loading trucks.

Three boats now can take out fish simultaneously, and there is loading space for four trucks. Icing and packing facilities are provided, and the plant has 28 employees and three trucks. At present, processing operations are handled by outside firms, and the Co-op carries an inventory of frozen scallops and flounders.

Capt. Rudolph Matland, owner of the *Rush*, is president of the new cooperative. Capt. Lief Jacobsen, who has the *Pauline H.*, is vice-president; Capt. John A. Silvia, owner of the *Falcon* and *Catherine & Mary*, is treasurer; and Capt. Mathias Bendiksen, who has the *Growler* and *Capt. Bill II*, is secretary.

The Co-op buys at the New Bedford auction room, and handles outside boats as well as those of its members. It already has unloaded boats hailing from Boston, Gloucester, Stonington and Point Judith.

In addition to its Fish & Scallop Division, the Co-op has



Joseph P. Boldiga, general sales manager, Fish and scallop Division of the New Bedford Seafood Cooperative Association at Fairhaven, Mass. At right is the Co-op's oil barge recently repowered with a 250 hp. Atlantis engine by E. M. Goff Co.



an oil division, of which Patrick Sweeney is manager. An oil barge is operated for boat-side delivery of fuel oil and RPM Delo lubricants. The barge, which weighs over 70 tons loaded, was recently repowered by L. M. Goff Co., Providence, R. I. with its Atlantis V-8 marine engine. Developing 250 hp. at 4400 rpm., it drives a 48 x 38 propeller through 9.1:1 reduction gear, and it is fitted with Sendure heat exchanger, Sun tachometer and Blue Streak wire and cable. The engine was installed by Norlantic Diesel, Inc. under supervision of Goff's engineer, Lloyd Patterson.

## Captain Hans Haram's Career Spans 60 Years in Fisheries

A highly respected member of the New Bedford fishing fraternity with 60 years of waterfront experience, is Capt. Hans Haram, owner of the 82-foot dragger *Viking*. Now in his 78th year, he is as keen as ever and can look back on an adventurous and successful fishing career.

Capt. Haram has fished both sides of the Atlantic as far north as Iceland, and in over a half century of life at sea in Norway and the United States he has ventured into all types of fishing. Born in the town of Haram, Norway, the son of a cod fisherman, Capt. Haram has fished "since he learned to walk".

Winters in Norway were spent drifting for herring, and from February to April was cod fishing time. Then the cod had to be split, salted and dried, reloaded on an open boat and brought over to the city of Alesund to be sold to buyers for shipment to Spain, Italy and India. He reminisced it was a two-day family holiday when the cod was ready for market.

His career at sea started in 1901, fishing the costal shelf off Norway in a 40-foot fishing boat under sail. Trips were from 3 to 4 days with little to eat, and virtually no sleep. Herring sold at 26 cents a barrel, and cod dried, split and salted were marketed at \$1.00 for 40 pounds.

In 1903 he went long line fishing on his first boat powered by a 6 hp. kerosene engine, with mountain tops for ranges and stones tied on fish twine to record depths.

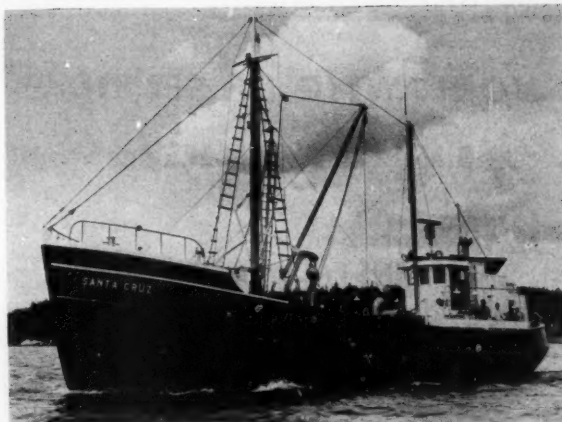
In 1913 he obtained a berth on a fishing steamer with accommodations to sleep and cook aboard. He fished in Norway during World War I and had a turn at whaling as captain and gunner aboard a converted fishing vessel. He went whaling west of Spitzbergen and out in the North Sea.

Capt. Haram came to the United States in 1923, worked as a dock builder in New York City and later as a steel worker there. But the sea was calling him, and in 1925 he went to Vineyard Haven, Mass. where he purchased a 40' boat and tried lobstering. But the next year he came to New Bedford and started out as a quahog fisherman. He soon brought a 44' boat with a 20 hp. engine. Luck and good friends were with him, and within two years he purchased the scalloper *Minnie V*. He made good money scalloping in summer and dragging for yellowtail in winter. In 1930-31 he had the *Viking* built by the Morse Boatyard at Thomaston, Me. with Carl Beckman as part owner.

The *Viking* was rigged for long-line halibut fishing, being one of the first vessels on the Atlantic Coast to set and haul gear from deck rather than from dories. The vessel combined the best and most up-to-date features used in Norway and on the Pacific Coast at the time.

He took her long line fishing as far north as Newfoundland and Labrador, fishing for halibut but prices were poor and long line fishermen were hard to find, and he returned to New Bedford and scalloping.

Capt. Haram recalls fishing alongside icebergs in 1932, 200 miles northeast of Belle Isle Strait and 500 miles south of Greenland. He steamed all one night in the thick of fog, unable to see a thing. When it got light the next morning, he was surrounded by icebergs, many of them higher than the mast head of his vessel. Amazed at how he got through, Capt. Haram said: "Someone Else held the



New 80' scalloper "Santa Cruz" built by Harvey F. Gamage, So. Bristol, Me. Below, owner George Ponte, left; and Capt. Manuel Mello, skipper, of New Bedford, Mass. She has a D375 Caterpillar Diesel.



wheel that night." He then caught 50,000 lbs. of halibut in 3 days.

Capt. Haram relates another halibut trip to the Grand Banks one January when it was so rough and cold that they had to lay-to for 14 days. During this time everything froze on deck, there were 3 inches of ice all over the pilot house and it took half a day to clear off one spot. They fished only two days during the entire trip.

The *Viking* was taken over by the Navy in World War II and in 1943 Capt. Haram had the 53' dragger *Arnold* built at Kennebunkport, Me. to take her place. After the war, the *Viking* was returned to him and four years ago he sold the *Arnold*. Capt. Laurits Flem, who had fished with Haram since 1931, has been skipper of the *Viking* since 1944.

The *Viking* was recently repowered with a new Waukesha Diesel. Sold and installed by Hathaway Machinery Co., Inc., Fairhaven, Mass., the engine is a LRDCM Defender Model, rated 335 hp. at 1200 rpm. Swinging a 5-blade, 56 x 38 Columbian propeller on a new 5" Tobin Bronze shaft, it gives the vessel a speed of over 10 knots.

Accessory equipment includes No. 3774 Snow-Nabstedt air-actuated 3:1 reverse-reduction gear, American Bosch Hydrotor starting system, Ross heat exchanger, Marine Products raw water pump, two belt-driven Jabsco pumps for bilge and deck service, and Worthington air compressor. Westinghouse Tridyne controls are provided with Stewart-Warner instrument panel in the pilot house.

The engine is piped with Aeroquip hose, and a new set of Exide KX Ironclad 32-volt batteries was installed. The vessel has Hathaway winch, deck gear, stuffing-box and stern bearing.

## New Scalloper "Santa Cruz" Joins Fleet

Latest addition to the New Bedford scallop fleet is the 80-foot *Santa Cruz*, which was launched in July by Harvey F. Gamage, Shipbuilder, South Bristol, Me. She



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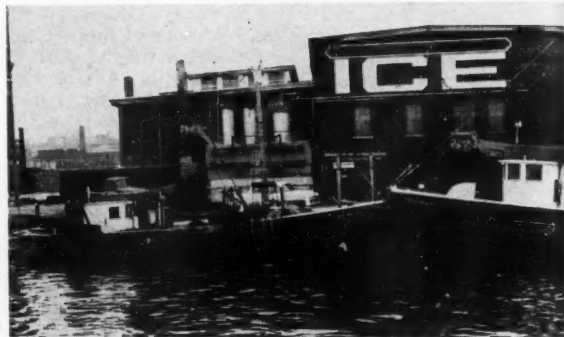
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### NORTHEAST MARINE ELECTRONICS

Robert Hathaway

Alan Cooper

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Two Stonington, Conn. draggers at wharf of Crystal Ice Co., New Bedford, Mass.: "Irene & Walter", owned by Capt. Fred Hatfield, equipped with Brodeur portable emergency pump; and "Rosemary R.", owned by Capt. Higinio Rendeiro.

is owned by Clinton-Serafina, Inc., of which George Ponte is president, and Capt. Manuel Mello is skipper. The vessel is named for an ill-fated 66' dragger which went aground off Martha's Vineyard last Fall.

Designed by Dwight S. Simpson & Associates, the new scalloper is framed with 3" double sawn, moulded oak on 18" centers, planked with 2" oak and decked with 2½" pine. She has 9 bunks forward, 2 in the after cabin and one in the stateroom. Fuel capacity is 3500 gals. and she carries 600 gals. of fresh water.

Propulsion power is provided by a D375 Caterpillar Diesel, rated 300 hp. at 1225 rpm. with 3:1 hydraulic reduction gear, furnished by Perkins Machinery Co. The engine turns a 58 x 36, 3-blade Columbian propeller on 4½" Tobin Bronze shaft with Goodrich Cutless rubber stern bearing and Hathaway flax-packed stuffing box.

The auxiliary power is supplied by a Deseco-Lister Diesel unit comprising a 9 hp. Model FR1 engine driving a 5 kw. Kurz & Root generator, 1¼" Jabsco pump and Quincy air compressor. There is a 7½ kw. Kurz & Root generator as well as a Jabsco pump running off the main engine, the batteries are 112-volt, Type 8HHG-21 Surrlette, and "Safety" voltage regular and reverse current relay are provided. Other pumps include an electric driven Jabsco for wash-down and an Edson hand bilge pump on deck.

Electronic equipment aboard the *Santa Cruz* furnished by Marine Radio and Electric Co., Fairhaven, Mass. includes Apelco AE176AM, 150-watt radiotelephone, Bendix DR12 depth recorder, two APN4 loran units and Edo radar.

The vessel has 7" White Constellation compass, Seafarer 12-man inflatable life raft from Capt. A. J. Pedersen, and Hathaway 653 winch and deck gear. The galley has a Shipmate 450 oil-burning range and the after quarters are heated by a Shipmate oil-fired hot water boiler.

## Dragger "Sea Ranger" Repowered

Capt. Charles Tapper's 82-ft. New Bedford dragger *Sea Ranger* has been repowered with a new 12V-71 General Motors Diesel. Rated 335 hp. at 1800 rpm., the engine swings a 56 x 44 four bladed propeller with a 5:1 reduction gear. It was sold and installed by D. N. Kelley & Son, Inc., Fairhaven, Mass., through Hubbs Engine Co., Boston.

The *Sea Ranger* was built at Thomaston, Me. in 1928 and has tonnage of 72 gross and 23 net. Registered dimensions are 80.5 x 19.1 x 8.9 ft. Her skipper is Capt. Roger Christensen.

Now 79 years old, Capt. Tapper is a veteran of the fishing industry. He started fishing out of Brooklyn, N. Y. in 1900, having come from Newfoundland. He has fished the entire Atlantic Coast, having operated in the North Carolina to Florida area during the winters of his earlier years. In New Bedford since 1929, Capt. Tapper has been active in the development of the port's scallop and ground-

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fish business. He also owns the 92' scalloper *Mary Anne*, Capt. Moe Cullen, and in recent years he has stayed ashore handling the outfitting and business details for his two vessels.

### Airplane Spotting Swordfish

An airplane is being used for the first time this season to spot swordfish for New Bedford fishermen, who maintain radio communication between the plane and their boats.

The swordfish boats are the *Barracuda*, *Jennie M.* and *Sanson Joy*, owned by the Avila Brothers, and the plane is operated by Richard Roland of Boxford, Mass. Radio service is provided by the new Vocaline citizen's band 5-watt radio, with units installed in each boat and the plane by Northeast Marine Electronics of New Bedford.

Northeast also equipped the New Bedford dragger, *Curlaw*, owned by Capt. Gerald McCarthy, with a new Raytheon 1700 radar.

### New Owners at Finest Fillet

New management has taken over the Finest Fillet Co., Inc., New Bedford, with former employees Joseph Singleton as president and Richard Pragana as vice president. Florence De Mello is treasurer.

Former head of the firm, Antone De Mello, has retired from the fish business. The company plans to expand its frozen fish production.

### Dragger "Sharon Louise" Overhauled

The 71' New Bedford dragger *Sharon Louise* recently had a general overhauling at D. N. Kelley & Son, Inc., Fairhaven, Mass. A new steel trunk was installed and the vessel was completely rewired. She is owned by Hervey Tichon and skippered by Capt. Peter Roche.

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## NORTH ATLANTIC

### Radioactive Waste Has No Effect in Boston Dumping

A survey of a site off Boston (Mass.) Harbor formerly used for the disposal of limited quantities of packaged radioactive wastes has not revealed any radioactivity attributable to the disposal operations.

Samples of water, sediments, and marine organisms living in the area were collected by the U. S. Coast and Geodetic Survey and were analyzed for radioactivity by the U. S. Public Health Service at its Engineering Center in Cincinnati. The radioactivity detected was found to be in the same range as that of background activity at other ocean locations where no radioactive wastes have been disposed of.

The site was used under Atomic Energy Commission (AEC) authorization and license from 1952 to August 1959, by a Boston disposal corporation for the disposal of low-activity packaged radioactive wastes.

The license of the company was amended by the AEC in August 1959 to require the firm to carry out its operations in deep water (1,000 fathoms) off the continental shelf. No further use of the area off Boston Harbor for disposal purposes is contemplated. The Commission's present policy is to require that wastes be disposed of in water at least 1,000 fathoms deep and the Commission is not contemplating any change in that policy.

The Massachusetts Bay site is one of four off the New England coast studied during the past year by scientists from the University of Connecticut, the U. S. Coast and Geodetic Survey and the U. S. Public Health Service, working in conjunction with the Bureau of Commercial Fisheries of the U. S. Fish and Wildlife Service. The work was part of a research program financed by the Atomic Energy Commission.

### Research Seen Revitalizing N. E. Seafood Industry

Sen. Leverett Saltonstall of Mass. recently praised the federally subsidized clam and oyster research program as one which bids to revitalize the New England seafood industry.

Saltonstall said in a statement that good progress had been made by the federal government's shellfish, research center at Woods Hole, Mass., Milford, Conn., and Boothbay Harbor, Me.

He said research proved the predatory green crab was one of the chief enemies of the soft or steamer clams in northern Massachusetts and Maine waters. Once identified, he said, methods were found to prevent the crabs from destroying clam flats.

### Record Scallop Catch by Portland Boat

The Portland, Me. scalloper *Sylvester F. Whalen* last month landed what is believed to be the largest single catch ever made in the U. S., some 42,000 pounds. The vessel, skippered by Capt. Marty Manley, of Scarborough, dragged up her catch on the northeastern edge of Georges Bank.

She made her record catch and landed it at Fulham Bros. Co. plant on Central Wharf in eight days. The average catch made by scallop draggers is about 11,000 pounds.

### Maine Firm Moves Lobster Crates on Belt

A new ramp with endless belt to haul lobster crates from the water into trucks has been installed by Spruce Head Lobster Corp., Spruce Head, Me. With the increased facilities of a new addition completed last Fall, the firm has tank capacity for 40,000 lbs. of lobsters.



New 34' Rockland, Me. lobster boat "Falcon", owned by Elmer R. Witham and powered with a 100 hp. Osco Diesel.

### New Lobster Boats Launched in Maine

Hugo Lehtinen Boat Shop of Tenant's Harbor recently completed a new 34' x 9'10" lobster boat, the *Falcon*, for Elmer R. Witham of Rockland. The boat is fitted with 16-bushel capacity wooden bait box located in the cockpit, and has fiber glass coating on the wash boards and hauling strip. Equipment includes 100 hp. Osco Ford Diesel with 2:1 Paragon hydraulic gear, 22 x 18 Columbian propeller, 1½" Tobin Bronze shaft, Munston Nassau telephone, Ritchie compass, Bendix depth recorder, Morse engine controls, Delco batteries and Ansul fire extinguishers.

Lash Bros. of Friendship, Me. recently completed a 32' x 10' lobster boat, the *Hornblower*, for Capt. Horatio Knight of Rockland. She is powered by a 135 hp. Osco-Ford engine with Paragon 2:1 reduction gear, sold by Rockland Boat Shop.

### Repower Maine Lobster Boats

The 36' Maine lobster boat *Verna Pat* has been repowered with a 96 hp., 2600 rpm. Mercedes-Benz engine with 2:1 Capitol hydraulic and reduction gear and 21 x 19 propeller. The boat is owned by Capt. Vernon L. Philbrook of Matinicus Island and the engine was furnished by Chase, Leavitt & Co., Inc., Portland.

A similar model engine powers the new 35' lobster boat *Lady Marion* owned by Capt. Malcolm Griffin of Cliff Island. She was recently completed by Alfred Strout of West Buxton and has cedar planking, oak frames, Everdur fastenings and a 1½" Monel shaft.

### Magazine, Gold Lobster Publicize Maine Industry

A pictorial salute to Maine lobstermen and lobsters was made in a recent issue of the Saturday Evening Post with a two-page full-color photograph of Prospect Harbor and a 200-word caption described the lobsterman's lonely work. The Post used the photograph in its weekly feature, "The Face of America."

In addition, the Department of Sea and Shore Fisheries, the Department of Economic Development and representatives of the Curtis Publishing Company planned a special display window at the Jordan Marsh store in Boston.

Receiving the place of honor in this display was a gold-plated Maine lobster. The lobster's safe arrival in Boston was assured by Lloyds of London for one million dollars, and was given a police escort on its trip from Maine to Massachusetts where it was delivered to Jordan Marsh

in a Brinks armored car. Another feature of the display was the official throne of the sea goddess of Maine's annual Seafood Festival.

In Maine, window displays were set up in a number of key cities. Curious representatives' automobiles and distributors' trucks both in Maine and the Boston area carried lobster traps on their roofs together with explanatory posters. Further publicity for the Maine lobster is expected nationally through the efforts of the National Fisheries Institute which has expressed interest in the Project.

### Addition to Maine Packing Company

A two-story 50' x 90' addition has been completed by Port Clyde Packing Co., Inc., Port Clyde, Me. The first floor area is used for storage, while the second floor adjoins the packing room and houses the steam boxes and drying chamber. The new boxes are of steel construction and hold 40 cases of sardines each of which are cooked under pressure for fifteen minutes. The boxes have sliding drawers operated by overhead electric hoist and cable and are gasket sealed with four set screws. Also newly installed is a stainless steel 12' x 5' x 5' tank, into which sardines are dipped in hot brine prior to entering the steam boxes.

### Radar Installed on Sardine Carriers

New Raytheon Model 1700 Radar units have been installed in several Maine and New Brunswick sardine carriers by H. G. Reed, Inc., McKinley, Me. Among the vessels equipped are the *America*, owned by Machiasport Canning Co., McKinley; *Novelty*, owned by Barter Canneries, Stonington; *Kingfisher*, owned by Clyde Bickford, Vinalhaven; *Atrya* and *Mione*, owned by Jonesport Packing Co.; *Lil Abner*, owned by Bennett Anthony of Wilson's Beach, N. B.; *Pride and Joy*, owned by Lawrence Chute of Wilson's Beach, N. B. and the *Birdena*, owned by Lawrence Pendleton of Deer Island, N. B.

A 100 fm. Raytheon Fathometer recorder has been installed in the Portland, Me. dragger *Lawrence Scola* by Northeast Communications Corp.

### Large Fish Landed at New Bedford

Big fish netted on the fishing grounds by New Bedford, Mass. draggers are making news, with a 308-pound halibut and 270-pound sturgeon landed there recently. The run on giants started a week earlier when an 18½-pound haddock, one of the largest ever taken from the North Atlantic, was brought into port by the *Teresa and Jean*.

The dragger *Annie Louise* unloaded recently at Ell Vee Dee, Inc. Greene and Wood Pier. Her catch included a 270-pound sturgeon.

The *Annie Louise* caught the unusually large fish while dragging several miles northeast of Sankaty Head, Nantucket. The 308-pound halibut was netted by the *Whaler* in South Channel, southeast of the same island.

### Get New Life Rafts

Three Boston draggers are getting new Seafarer inflatable life rafts in fiber glass containers, sold by Bay State Marine & Equipment Co. Capt. Frank Tringale's *Agatha* has an 8-man raft, Capt. Vincent Gandolfi's *Manuel F. Roderick* has a 9-man model, and Capt. Joseph Orlando will have a 10-man raft for his *Eagle*.

Capt. A. J. Pedersen has sold a 12-man Seafarer raft for the Rockland, Me. scalloper *Pocahontas*, Capt. Maynard Lammi.

### East Coast Equipment Adds Gear Service

East Coast Equipment Corp., Needham Heights, Mass. has been appointed an approved service station for Warner Gear marine transmissions made by Warner Gear Division of Borg-Warner Corp. East Coast is distributor of Cerlist marine Diesels.

### Provincetown Has Big Tuna Haul

The season's first haul of big tuna was landed at Provincetown, Mass. docks recently with more than 80 of the fish at both docks averaging about 450 pounds each dressed. Some of the huge fish dressed down to more than 500 pounds. Pond Village Traps, off Truro, had 38 big tuna, and Monument fish traps 23, while Consolidated Traps at MacMillan Wharf reportedly had 23.

### Oak Bluffs Dragger Sold

Sale of the 80-foot dragger *Gertrude D.* by Captain Horace Devine of Oak Bluffs, Mass. to Captain Charles Vanderhoop Jr., of Gay Head has been announced. The craft is currently on a swordfishing trip under command of her new owner-skipper.

### "Marianna II" Repowered at Gloucester

The 55' Gloucester, Mass. dragger *Marianna II*, of which Capt. Cosimo Parco is owner-skipper, recently was repowered with an Allis-Chalmers Diesel, furnished by Allied Diesel Sales & Service, Inc., Boston.

A new turbocharged Model 21000, the engine is rated 230 hp. at 1800 rpm. and swings a 44 x 34 four-blade propeller through Capitol 3.5:1 hydraulic reduction gear, and has a Twin Disc power take-off.

Used for whiting in the summer and groundfishing during other seasons, the vessel was built at Morehead City, N. C. 3½ years ago. Capt. Parco has been fishing 40 years.

### New Pilot Boat For South Carolina

The new 65' steel *Charleston Pilot II* has been launched for South Carolina service by Gladding-Hearn Shipbuilding Corp., Somerset, Mass. She is powered by a General Motors 12V-71, 335 hp., 1800 rpm. Diesel sold by Hubbs Engine Co.

The pilot boat has a Model 197DLCM Waukesha Diesel, 65 hp. at 2000 rpm. with Capitol 1.5:1 reduction gear, which drives the propeller shaft through a V-belt and is used only for jogging. There are two generating sets comprising 10 kw.; 115-volt AC Kohler generators driven by 180DLC Waukesha 35 hp., 1800 rpm. Diesels. The Kicker engine and generating equipment were furnished by Hathaway Machinery Co., Inc. An American Bosch hydraulic starting system is used for all four power units.

### Striped Bass to Remain Plentiful For Years According to Prediction

Striped bass fishing along the New Jersey shore should be excellent for several years, experts of the State Division of Fish and Game, Department of Conservation and Economic Development, predicted recently.

During late April and early May a tremendous body of young striped bass moved through New Jersey's coastal waters. Many seasoned observers pronounced it the heaviest run of young fish they had ever seen.

In February, 1959, biologists of the Virginia and the Maryland Fisheries Laboratories announced the presence of unusually large numbers of young striped bass in the spawning and nursery areas of their respective states. These fish were the result of unusually successful spawning in the spring of 1958.

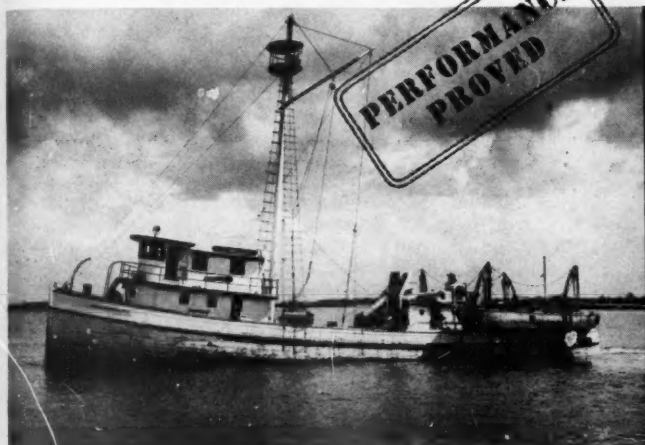
Young striped bass stay fairly close to their nursery areas for the first two years of life and thereafter take part in the annual north-south migration. Most of the fish which passed through New Jersey waters will probably spend the summer in southern New England.

### New Jersey Landings up 22 Percent

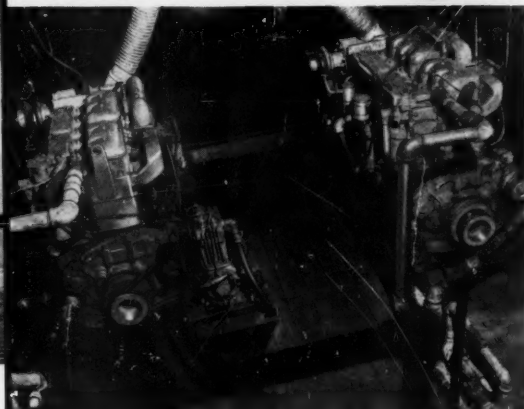
Landings of fish and shellfish, exclusive of menhaden for reduction, at New Jersey ports during May 1960, amounted to 6.9 million pounds valued at \$537,000. Compared with the same month last year, this was a gain of 22 percent in volume and 4 percent in value.

Surf clams continued to lead all other species with 2.3

## "Our new Allis-Chalmers 21000's are really work horses,"



says Captain Edward Rice, skipper of the 115-ft M/V "Alabama" of Pascagoula, Mississippi. "I find they are cheaper to operate — less fuel with plenty of power — a hard combination to beat. I've been fishing for more than 20 years now, and these Allis-Chalmers diesels are my choice of them all."



Two 21000 turbocharged marine diesels driving twin 52" by 35", 3-blade screws through 3.8:1 reduction gears. These engines are rated at 320 shp @ 2000 rpm for light duty and 230 shp @ 1800 rpm for continuous heavy duty.

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The "Alabama" was repowered to increase performance and reduce operating cost — and the A-C 21000 accomplishes both goals, according to James E. McGrath, manager of Wallace M. Quinn Fisheries, Pascagoula, Mississippi, owner. "We are well satisfied with the performance and were indeed surprised at the low fuel consumption. We anticipate using these Allis-Chalmers engines in our future vessels."

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BM-37

million pounds of meats. Scup or porgy was next with 1.1 million pounds, followed by fluke with 659,000 pounds. These three species made up 58 percent of the total.

Ocean County led in volume with 3.1 million pounds valued at \$219,000. Cape May County was second with 2.7 million pounds valued at \$171,000, followed by Atlantic County with 530,000 pounds valued at \$94,000, and Monmouth with 356,000 pounds valued at \$23,000. The remaining 263,000 pounds valued at \$30,000 were represented by Bergen, Cumberland, Hudson, and Burlington Counties.

During the first five months of 1960, landings of fish and shellfish, exclusive of menhaden for reduction at New Jersey ports amounted to 30.3 million pounds with a value of \$2.5 million. Compared with the 1959 five-month period, this was an increase of 23 percent in quantity.

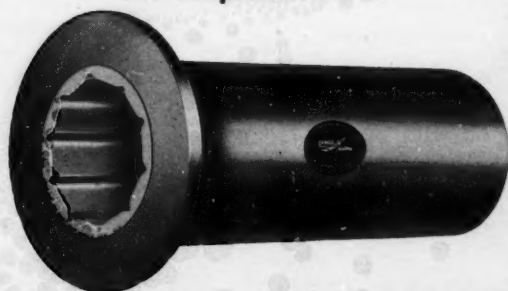
### Narragansett Laboratory in New Quarters At Saundertown

The new Narragansett Marine Laboratory at Fort Kearney, Saundertown, R. I. which replaces the building razed by fire nearly two years ago, will be called the Charles J. Fish Oceanographic Laboratory in recognition of the services of Dr. Fish, a member of the faculty of the University of Rhode Island. Dr. Fish has headed the university's marine biological program since its inception in 1935. The new laboratory will make it possible to carry on and expand the joint research work carried on by state and university marine specialists.

The new laboratory is of frame construction faced with brick, and was built by the C. & B. Building Co. of Newport at a contracted price of \$127,067. It is 194 ft. long, 37 ft. wide, and has 7242 square feet of floor space. A central corridor extends the full length of the building which has eight laboratories, each with an office; a library, conference room, three business offices and a photographic dark room. The sides of the laboratory are about 75 percent glass to insure maximum lighting.

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Accepted by F.C.C. for use in commercial boats carrying passengers.

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MARINE DEPARTMENT  
NORTH HOLLYWOOD, CALIF.



## Pacific Coast Shrimp Grounds

(Continued from page 7)

pounds of sidestripe shrimp (56 shrimp to the pound) were taken west of Cape Beale, and represented the largest catch of that species made during the explorations. No commercial concentrations were found in the deep-water trough running southwest from Cape Flattery and on the offshore continental slope.

A total of 81 exploratory drags was made between Point Grenville, Wash., and Cape Falcon, Ore. Fishing activities were concentrated in the area between Columbia River and Cape Falcon, because most of the northern part of the area had been investigated earlier! No snags were encountered during exploratory trawling at depths shallower than 100 fathoms, although the net was fouled several times when trawling in deeper water. Best catches during the cruises were made between the Columbia River and Cape Falcon.

A total of 83 exploratory drags was made between Cape Falcon and Newport, Ore. The bottom was clear in areas fished, and only 2 snags were encountered. Good catches of pink shrimp were made in the general area off Cape Lookout during June at depths between 90 and 114 fathoms. Seven drags in that area produced heads-on shrimp ranging from 81 to 138 per pound, at rates from 380 to 850 pounds an hour.

West of Manhattan Beach, the three best drags, at depths from 96 to 105 fathoms, resulted in ocean pink shrimp catches at rates from 440 to 600 pounds heads-on per hour. The count ranged from 109 to 175 shrimp per pound heads-on.

Four drags west of Cape Foulweather in 76 to 99 fathoms also yielded a fair sign of pink shrimp. Catch rates for those drags ranged from 200 to 450 pounds heads-on per hour with sample counts ranging from 129 to 170 shrimp per pound.

## Changing Great Lakes Fisheries

(Continued from page 10)

tion in Lakes Huron and Michigan to the extent that there was very little commercial exploitation for several years. The smelt catch has increased steadily since 1943 and in 1958 was the greatest ever recorded for the Great Lakes. It is evident that this fishery is not hampered by a lack of fish; however, as with chubs, the present production methods often cannot produce smelt to sell profitably at current market prices.

### Better Fishing Methods, More Research Needed

With the types of gear now in use, smelt are available to the fishermen for only short periods of the year. For two years Michigan supplied over 75 percent of the total Great Lakes smelt landings. Over 60 percent of the production took place in a 3-month period. During this period the price declined and most of the production was sold for animal food. Under these conditions some of the producers sold smelt for less than 2 cents per pound.

In some areas walleyes especially and blue pike can be expected to return in substantial quantities soon and support a commercial fishery. However, an early return of the lake trout in Lakes Michigan and Huron is not anticipated. To continue fishing in these lakes, fishermen must find more efficient methods of producing available species.

At present there is not enough practical information on available populations of fish in each of the Great Lakes, seasonal fish concentrations, extent of markets, and amount and availability of the capital investment needed to develop fully and regulate new types of fisheries. Further research is needed in the fields of biology, exploratory fishing, marketing and economics before definite conclusions can be drawn as to the potential of the developing fisheries.

## GREAT LAKES

### Propose Liberalized Fishing Regulations in Michigan

Five changes in Michigan's commercial fishing regulations tentatively approved by the Conservation Commission were due to come up for discussion last month at public hearings in Escanaba and Lansing.

The changes, slated for formal adoption by the Commission this month would first allow commercial fishermen under special permit to use gill nets less than 2½-inch mesh for taking chubs, herring, alewife, and smelt in those southern Lake Michigan waters where trawling for industrial fish became legal in June.

Secondly, the changes would then shorten the closed season on whitefish in Lakes Huron and Michigan by 15 days to begin October 15; and lower the legal size on catfish from 17 to 15 inches, provided that these fish be sold only at docks on or along the lake.

Finally, the proposed regulations would remove the closed season on black crappies (Calico bass) in Lake Huron; as well as match the season on yellow perch in Green Bay with the June 1-April 25 season in Lake Michigan.

### Ohio Landings Show Increase

Landings of fish at Ohio ports on Lake Erie during April, 1960, totaled 5,100,000 lbs., an increase of 1% when compared with landings in the same month of 1959.

Yellow perch was the leading item during the month with 2,000,000 lbs. Carp was second with 1,400,000 lbs., followed by yellow pickerel with 517,000 lbs., and sheepshead with 447,000 lbs. These four species accounted for 86% of the months total catch.

Receipts from District 1 (West of Huron) represented 83 percent of the total production for April 1960. District 2 (Huron to Fairport) accounted for 15 percent, and District 3 (East of Fairport) made up the remaining 2 percent.

### Dr. W. J. K. Harkness

Dr. W. J. K. Harkness, one of Canada's leading biologists, and chief of the Ontario Fish and Wildlife Division, passed away recently. Former president of the American Fisheries Society, Harkness also was a member of the Great Lakes Fishery Commission.

### Great Lakes Fishing Good During Warm Weather

Fishing generally over the Great Lakes basin reportedly has been "spotty" during warm weather. In Lake Superior, trollers were getting fair catches of lake trout and netters were getting light catches of lake trout and whitefish.

In Lake Michigan area, fairly good catches of small chub and smelt were made before the heat wave set in. In the Green Bay area perch catches were fair to good, while sheepshead takes were generally favorable, as were carp yields.

The runs of whitefish in Lake Huron dropped somewhat in July, while in Lake Ontario there was a good showing of this species. Light catches of yellow perch from Lake Erie has created an excellent demand for these fish. Carp and sheepshead takes from Lake Erie have been satisfactory but the market is a little slow for them.

Trawling, a new fishery on the Great Lakes, although a costly conversion for commercial fishermen who have large investments in traditional equipment for lake fish-



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"My Bendix has lots of power and good reception", he says. "It is remarkable for a small phone, and does a much better job than a larger unit it replaced. We talk to other carriers and seiners all along the Maine coast and into Nova Scotia, and it covers a 125-mile range without any trouble."

The "Black Diamond" is owned by Addison Packing Co., Southwest Harbor, which is operated by Maine's leading sardine packer.

**"Black Diamond" (right) at Addison Packing Co. dock**

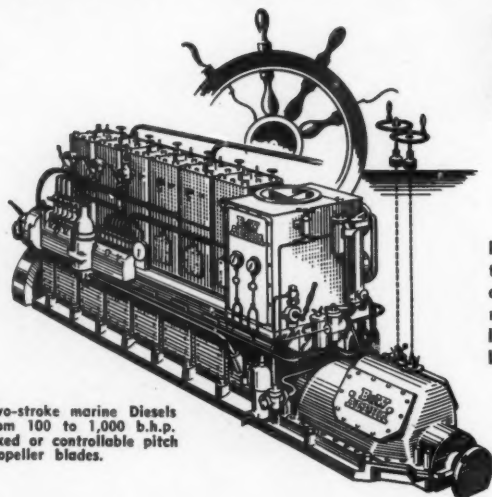


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ing, appears to be up and coming in the future for the commercial production of small fish, particularly chub and smelt. Trawling for smelt has proved to be a very profitable operation since these fish generally concentrate in vast schools.

From Lake of the Woods comes the report that commercial fishing production is ranging from fair to good. Experimental trawling operations in Northern Lake Huron and Georgian Bay commenced in July. Fishermen generally urge a strictly experimental basis on trawling for a time to give an opportunity for examining and considering results before any major operations are decided on.

**Want To Harvest Crayfish**

A large crayfish population in the Eagle Chain of lakes in Vilas County, Wis., has brought suggestions that commercial fishermen be permitted to harvest them. Crayfish already are harvested commercially in some Price County lakes and on Green Bay waters.

**Great Lakes Fishing Subject of Film**

"Fishing on the Lakes" will be portrayed in a sound-color motion picture now in production in which fishery activity on all the Great Lakes will be documented. Because so much of this material to be contained in the film is of a seasonal nature, the actual filming will require

more than a year. The picture will be ready for distribution on a free loan basis in about a year and a half.

The commercial fisheries picture, which is sponsored by the Outboard Marine Corporation, is being produced and will be distributed by the Bureau of Commercial Fisheries, Fish and Wildlife Service. A contract for the production facilities has been awarded to the Craven Film Corporation of New York City.

This is the second commercial fisheries film sponsored by the Outboard Marine Corporation and produced by the Bureau of Commercial Fisheries as part of the Bureau's policy of working cooperatively with the industry in the production of fishery educational films. The first, *Outboard Fishermen USA*, received wide acclaim in this country and won awards at the Edinburgh, Scotland, Film Festival in 1956.

**Judging Wisconsin Fishery Products**

A quality judging show on fisheries products was scheduled to be held at the Schroeder Hotel in Milwaukee this month under sponsorship of the Wisconsin Fish Dealers' Association in connection with the National Fisheries Institute.

The judges will submit opinions based on the Institute standard of quality, and their findings will be evaluated by the Institute's technologists. Products to be judged include smoked chubs, breaded lake perch, breaded fish sticks and breaded haddock portions.

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**The Storage Battery  
that**

**Can't Corrode Cables**

All Acid Sealed to Stop

Terminal Corrosion

Specially made Marine Batteries for all types of  
Engine Starting and Lighting Needs, 6 to 110 volts

Many well-known fishermen use  
Mule Batteries. Names on request

**MULE Battery Mfg. Co.**

45 River Ave.

Providence 8, R. I.

Gaspee 1-1663







New Prince Edward Island dragger "Colville Bay".

## New Canadian Dragger "Colville Bay"

A new 65' dragger, the *Colville Bay*, has been placed in operation by Capt. Percy O'Hanley of Souris, Prince Edward Island, Canada, who is fishing for Eastern Packing Co. Ltd. of the same port. Designed by Eldredge-McInnis, Inc., Boston, Mass., the vessel was built by Wagstaff & Hatfield of Port Greville, N. S. under the P. E. I. Fishermen's Loan Board program.

Power for the *Colville Bay* is supplied by a WAKDBM Waukesha Diesel, sold by Hathaway Machinery Co. Inc., Fairhaven, Mass. The engine is rated 195 hp. continuous at 1600 rpm. and drives a 52 x 40 Federal propeller through a 4.4:1 Snow-Nabstedt 3941 hydraulic reduction gear.

A dual starting system for the engine allows for the use of an American Bosch hydraulic starter, or 32-volt starting batteries. A Twin Disc direct drive power take-off operates the dragger's 1353 Hathaway winch. The new vessel has a 90,000 lb. capacity and makes 11 knots.

## Fish 'n Seafood Week Plans Underway for October Drive

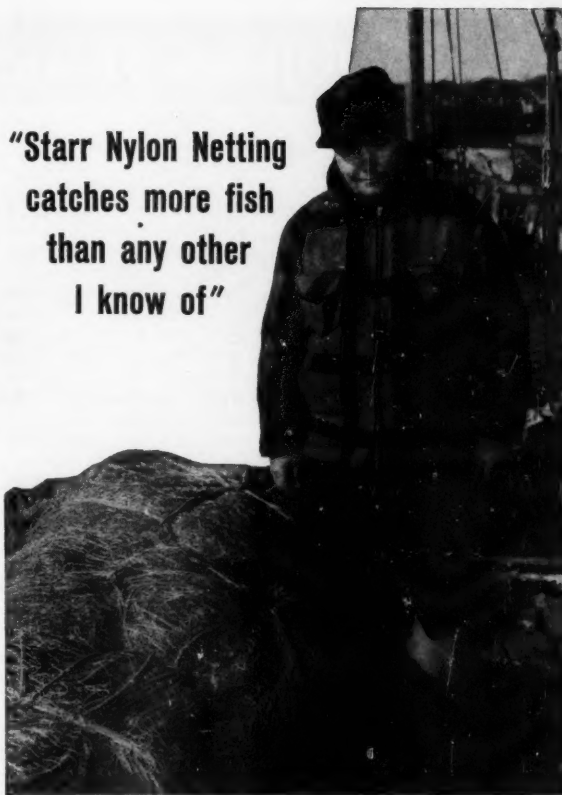
A happy sailor boy riding a huge fish is the emblem the fishing industry has adopted for the 1960 Fish 'n Seafood Parade, October 17-23, according to Richard Kulze, South African Rock Lobster Assoc., New York, who is chairman of this year's Fish'n Seafood Week Committee. The emblem is being sent to all members of the industry and to leading food store operators so that they may incorporate it in their own advertising.

Processors and packers of fishery products are buying point-of-purchase materials for distribution in food stores and institutional outlets. Murray Wheeler, director of the Committee's advertising and publicity, announced that among the food chains which have indicated they will use store material in their promotions of the Fish 'n Seafood Parade are: A & P., Safeway, Kroger, and Food Fair, as well as Giant Stores of Washington, and Big Bear of Columbus, Ohio.

Regional Fish 'n Seafood Week Committees are being formed throughout the United States to plan local advertising and publicity in newspapers, on radio and television, press functions, distribution of store material—in order to coordinate their efforts with the national Committee's advertising and publicity.

Cooperating with the industry, the Bureau of Commercial Fisheries' field staff of marketing specialists and home economists will work closely with area chairmen. The Government Bureau will provide radio and television stations with commercials, and will distribute bulletins to the institutional trade.

"Starr Nylon Netting catches more fish than any other I know of"



... one big reason why  
Maine Skipper rates

# STARR FIRST!

Wilho Tiensivu of "Jack & Andy", a 40' Gillnetter of Portland, Maine, has been using Starr Netting for 24 years. Says Skipper Tiensivu, "A good product became even better with the advent of Starr Nylon Netting. There's no rot, it resists wear and yet is lighter because the net doesn't absorb water. Starr Nylon catches more fish per fathom of net than any other I know of."

Another in a new series of Starr advertisements direct from the fishermen using Starr Nylon Netting.

STARR NETTING . . . STAR PERFORMANCE



**A. M. STARR NET CO.**  
EAST HAMPTON, CONN., U.S.A.

# EQUIPMENT and SUPPLY NEWS

## Goodyear Has New Hose Lines

A new line of hose designed especially for the fishing industry was announced recently by the Goodyear Tire & Rubber Co., Akron 8, Ohio. The new line includes two major types of fish suction hose and a high pressure clam jet hose.

Style "LW" light weight fish suction hose is designed primarily for "at sea" unloading of fish nets. It has a spirally fluted cover for light weight and flexibility, and to make it useful at docks when severe cover abrasion is not a factor.

Style "HD" heavy duty fish-dock suction hose will handle dock unloading of boats and serve as flexible sections in fish transport lines in canneries and processing plants. Its smooth cover is designed to resist severe abrasion. Also in the new line is style "HP" high pressure clam-jet hose for use in dislodging clams from the ocean floor. It boasts a tough abrasion-resistant tube and cover.

## Chrysler to Market Perkins Diesel

Chrysler Corp. Marine and Industrial Engine Div., 12200 E. Jefferson Ave., Detroit 15, Mich., has completed an agreement with F. Perkins Ltd. of Peterborough, England, to market Perkins Diesel engines in the United States and Canada.

The arrangement will provide a complementary line of marine, industrial and agricultural diesel engines to augment the extensive gasoline line now produced by Chrysler. Chrysler will offer the complete line of Perkins high-speed diesels—3, 4, and 6-cylinder units ranging from 25 to 130 hp. All Perkins engines are liquid cooled and operate at speeds up to 4000 rpm.

## Non-Slip Resin-Abrasive Deck Coating

A recent development in abrasives by Norton Company, Worcester 6, Mass., makes it possible to protect boat deck areas with a durable, water and chemical resistant, protective abrasive tread. An economical and easily applied non-slip resin-abrasive coating can be brushed or rolled on wood, steel and practically any other walking surface.

One of the first experimental applications of this non-slip surfacing has been made on the wooden decks of the Boston trawler *Michigan*. Another marine test installation was made in the galley of the *Delaware* operated by U. S. Fish and Wildlife Service out of East Boston.

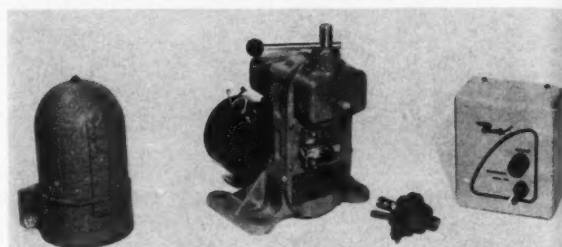
No special equipment or training is needed to apply this protection to reduce slipping hazards, and resin-abrasive kits now are on the market. After rolling or brushing the resin onto a clean surface, the abrasive, which could be the Norton Company products of Alundum (aluminum oxide) abrasive, or Crystolon (silicon carbide) abrasive, may be broadcast into it. Most of these mixtures set up hard enough for foot traffic within a few hours.

## Columbian Bronze Electronics Division

Columbian Bronze Corp., Freeport, N. Y. recently announced the formation of an electronics products division to manufacture and distribute a line of marine communication, navigation and safety devices.

The new division, known as Columbian Hydrosonics Inc., will manufacture a line of marine electronic products which, initially is planned to include a sonar depth finder, radio direction finder, radio telephone and gas sniffer. It is expected that the product line will be expanded when full production of the basic equipment is reached.

The company plans to market its marine electronic products through the existing marine distribution pattern.



Model 125B Bendix automatic pilot features low current drain, pilot house control panel with on/off switch and weather sensitivity control, in 12 or 32-volt types.

## Bendix Modified Automatic Pilot

Bendix-Marine, 8211 Lankershim Blvd., North Hollywood, Cal. is now producing a modified version of its Model 125B Automatic Pilot. First introduced ten years ago as the Model 125, the new unit incorporates all the latest engineering in the compass unit that is found in the Model 14 auto pilot.

Three units comprise the system: the binnacle; steering motor, which has manual clutch for engagement; and the small control unit that includes the on/off switch, weather sensitivity control and provision for a remote course-changing and dodging accessory. It is available for either 12 or 32-volt systems.

## Falcon Distributes Clark-Cooper Horns

Clark-Cooper Co., Palmyra, N. J., has assigned exclusive distribution of their large marine air horns and accessories to the Falcon Alarm Co., Summit, N. J.

Falcon's distribution will be concentrated on two basic Clark-Cooper lines, their Admiralty and Herald air horn models. The Admiralty line consists of 5 principal models, of all cast bronze construction. Lengths range from 6 to 19 inches, and diaphragms from 3 to 10-inch diameter. When used singly, the horns are audible from ½ to 3½ miles.

The Herald line is comprised of light-weight horns that require a relatively small volume of air. These horns, with 8 models in all, have cast-bronze air chambers and back plates, with spun brass air bells, and are 12 to 14 inches long with diaphragms from 3 to 6-inch in diameter. Their range is ½ to 2 miles. Manifolds are available in both lines for various multiple installations to increase audible ranges on the Admiralty to 5 miles and the Herald to 2½ miles.

In addition to Clark-Cooper horns, all fully approved by government handling agencies including the U. S. Coast Guard, Falcon will handle the company's timers, valves, whistle pulls, solenoids and other accessories.

## Layton Has Boat Name-Call Letter Plate

Layton Industries, Inc., 20 Ericsson St., Dorchester, Mass., is offering custom engraved name plates for boats equipped with marine radiotelephones. They are available in polished brass or black plastic with white letters. Escutcheon pins are provided. The boat name and call letter plate comes ready to mount near the radiotelephone.

## Book Tells History of Rope

The story of rope is told in Bill Sévern's book "Rope Roundup" (\$3) recently released by David McKay Co., Inc., 119 West 40th St., New York 18, N. Y. The book traces the history of rope from the ancient Chinese to the present, including the use of rope in the marine industry.

## Mule Battery Service Expanded

Sales and service facilities for Mule batteries have been established in the New Bedford, Mass. area. Two distributors are cooperating in serving the marine and automotive fields. Julian Weigel & Son, 308 Earl St., is waterfront distributor; and Square Deal Automotive Service, 156 Clinton St., is the automotive outlet.

Mule Battery Mfg. Co., with plant at 45 River St., Providence, R. I., makes specially designed marine batteries for all types of engine starting and lighting needs. Batteries are available in standard sizes from 119 to 270 ampere hour capacities, 6 to 110 volts. Melvin K. Jacobs, who joined the Mule organization early this year as sales engineer, is covering the waterfront and is available for providing technical assistance on marine battery installations.

## Linen Thread Honors Cowan

One of the better known netting representatives in the Texas area, William C. Cowan, was congratulated recently by D. L. Malcolm, Jr., vice president & general manager of the Linen Thread Co., Inc., upon reaching his 25th anniversary as a member of that company's sales staff. Cowan, who resides in Galveston, Tex. and travels the entire Texas, Louisiana, and Mississippi Gulf Coasts, started with the Linen Thread Company in Baltimore, Md. in 1935.

## Twin Disc Introduces New Reduction Gear

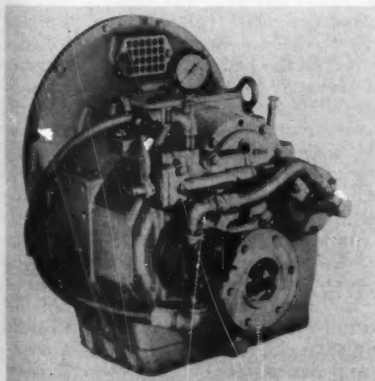
A new marine reverse and reduction gear—Model MG-508—has been introduced by Twin Disc Clutch Co., 1341 Racine St., Racine, Wis. It bears a strong resemblance to the larger Twin Disc MG-512 Gear, incorporating many of the features that have proved successful in that gear.

A metering-type selector valve actuates forward and reverse clutches hydraulically, to provide smooth, one-second response. Both clutches are constantly flooded with oil to carry away heat and reduce clutch plate wear. Full horsepower can be maintained continuously in both forward and reverse.

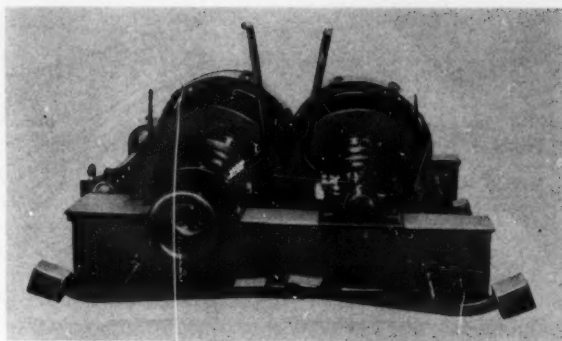
Helical gears on the MG-508 are carburized, hardened and ground. They are straddle-mounted on anti-friction bearings to prevent shaft deflection. The rubber block input drive makes an effective cushion against misalignment.

The MG-508 is available with reduction ratios of 1.47:1, 2.04:1, 2.95:1, and 3.39:1. Three optional driving rings permit use on many current engines as well as a replacement for older model Twin Disc Marine Gears without flywheel modification. It is especially suited as a replacement for the widely-used Twin Disc X-8708 war surplus gear.

The MG-508 is designed for easy maintenance. Both clutches can be removed for servicing without pulling the gear from the engine or disturbing alignment. An optional trolling valve can be furnished to permit extremely slow propeller speeds as required in certain fishing and maneuvering operations.



Newest and smallest addition to Twin Disc marine gear line, the MG-508, furnished with reduction ratios of 1.47:1; 2.1; 2.95:1 and 3.39:1.



New double drum Stroudsburg hoist developed for use on the Great Lakes features bolted pillow blocks with babbitted bearings, interwoven lined brakes and friction clutches.

## New Stroudsburg Hoist For Great Lakes

Stroudsburg Engine Works Inc., 62 North 3rd St., Stroudsburg, Pa., manufacturers of friction drum hoists, has announced development of a new double drum unit for use in the Great Lakes. The new hoist, designed at the request of the U. S. Fish and Wildlife Service at Sandusky, Ohio, offers the same features found in the regular Stroudsburg line.

The new Special Double Friction Drum Hoist has been job-tested on actual fishing operations in Lake Michigan and is manufactured with fabricated steel base. It features bolted pillow blocks with babbitted bearings and positive engagement and disengagement of friction by means of a bronze screw and ball thrust arrangement.

Interwoven lined brakes and friction clutches are used for maximum efficiency and long service life. Each of the two drums has a capacity of 2,000 feet of 7/16" cable. Single line hoisting capacity for the new unit is approximately 2,500 pounds.

## Barr Offers Improved Exhaust Header

Barr Marine Products Co., 2700 E. Castor Ave., Philadelphia 34, Pa., announces a new 2½" diameter, one-piece exhaust header which can be used with any marine or marine conversion engine (gas or Diesel). The header is designed with a 9/4" offset to positively prevent engine-damaging "bleed-back" of water from the exhaust line where engines are installed at or below water line level.

The manifold end is threaded for 2½" I. P. S. and the discharge end will take 2½" i. d. hose (the latter has the same i. d. as the o. d. of 2½" pipe.) The unit is designed to eliminate many costly extra fittings heretofore used to elevate the line prior to the water entry point. It is guaranteed by Barr Marine for one full year against defects in workmanship or material.

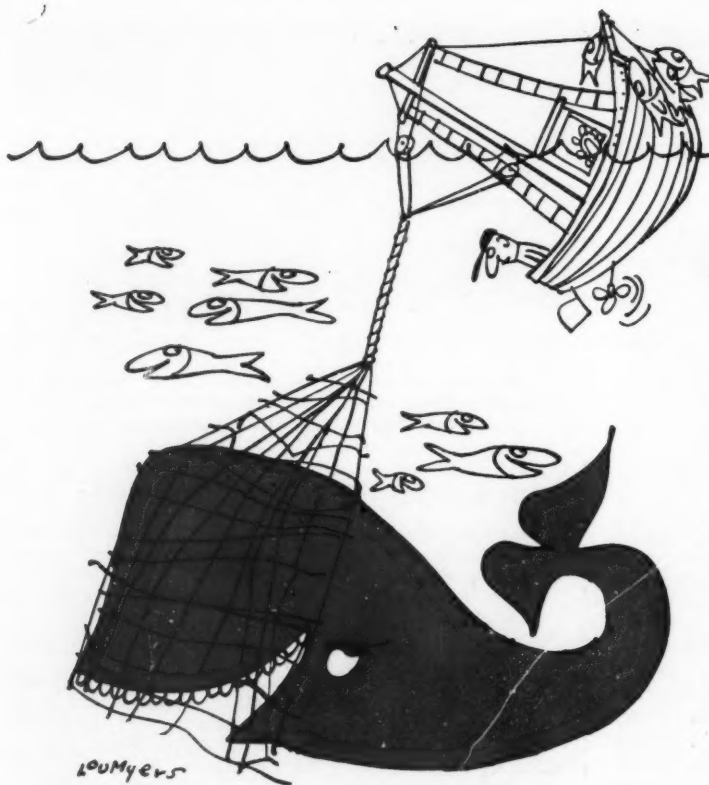
## Marine Radio and Electronics Handbook

A new handbook by Allan Lytel entitled "Marine Radio and Electronics" has been released recently by Cornell Maritime Press, Inc., Box 109, Cambridge, Md. Of interest to commercial fishing boat owners, the book describes many radio and electronic devices: what they do, installation, operation, and maintenance.

The material is presented, in such a manner that the more experienced operator as well as the beginner will benefit, by a technical writer with experience in the field of electronics. The 256 page book costs \$7.00. The book covers two way radiotelephone, marine radio, Radar, Loran, direction finders, depth indicators, fishfinders and other marine electronics.

Appendices include Federal Communications Commission publications, Coast Guard safety and distress operations, Coast Guard broadcast schedules, and list of marine frequencies, and other useful information.





## Sometimes Roebling Fishing Rope is too dependable

Strong, eh? Roebling Special Galvanized Fishing Rope is strong enough to do almost—but not quite—a whale of a job (anyway the boat isn't big enough).

One thing that keeps a wire rope manufacturer in business for more than 117 years is the fact that the rope he makes is strong for a long time. This strength factor is eminently true about Roebling Shrimp Rope, Trawling and Purse Seine Rope.

Granted, our illustration shows you *something* about its strength; your distributor waits, right now, to tell you all about it. If he's not in, write Roebling's Wire Rope Division, Trenton 2, N. J.

Buy From the Guy Who Eats Your Fish

**ROEBLING**

Branch Offices in Principal Cities  
John A. Roebling's Sons Division  
The Colorado Fuel and Iron Corporation

## 52nd Annual Oyster Convention

(Continued from page 9)

Measures to control the predation of the green crab have been of major importance to protect the stocks of soft clams along the New England coast, according to Robert W. Hanks, Bureau of Commercial Fisheries, Boothbay Harbor, Maine in his account of recent developments in chemical control of the green crab.

The development of new organic pesticides has suggested practical and economical methods of controlling bivalve predators, Hanks said. Presentation of these materials to undesirable species in the marine environment involves many problems especially where related species may be of commercial interest.

A method of incorporating an organic pesticide with fish bait which is then supported on a long trawl line has proved to be effective barrier to green crabs. Not only does the barrier prevent crab movement into the protected area but resident crab populations are reduced over a period of time.

Experiments in Kittery, Maine, resulted in a 76 percent decrease in the crab population within nine weeks after barrier applications. Significant differences between the inside and outside catches were evident after four weekly baitings. This was accomplished at a cost of \$4.30 per week.

The barrier restricts toxic bait to a predetermined area, it is lethal only to those anthropods that feed on the bait, can be directed toward one desired species with care and planning in application and is relatively inexpensive to maintain.

### Maximum Sea Scallop Yield

Maximum yield in the sea scallop fishery was discussed by J. A. Posgay, Bureau of Commercial Fisheries, Woods Hole, Mass. Posgay explained that sea scallops are fished from the Strait of Belle Isle south to the mouth of the

Chesapeake Bay but most of the landings, 85 percent in 1959, come from Georges Bank off the Coast of Massachusetts.

Records and samples of the Georges Bank fishery show that fishing effort is concentrated on a few grounds of limited extent on which the newly recruited year class is abundant.

Sea scallops of this size are rapidly increasing in weight in comparison with their rate of mortality from natural causes so that introduction of savings gear into this fishery would result in an increased catch per unit of effort on year-classes of comparable size.

Oystermen at the annual meeting called for action by Federal and State agencies to stem mortality rates in the ravaged Delaware Bay-Chesapeake Bay area. The resolution was one of several adopted by joint meeting of the Oyster Growers and Dealers Assoc., the National Shellfisheries Assoc. and the Oyster Institute of North America.

The organizations asked the agencies to maintain as spawning stock the resistant, surviving oysters in the Delaware Bay, claiming the growers and dealers said the progeny of these survivors will replenish the depleted Atlantic coast areas.

The oystermen also asked the Federal and State agencies to support increased research to determine the causes of oyster deaths. "Research is an important step that will enable us to more quickly bring about the recovery of the oyster industry in mortality-stricken areas", the second resolution read.

Citing the importance of fresh water supplies to the environment of coastal fish and shellfish, the members passed a resolution commending the Senate Select Committee on National Water Resources for holding public hearings to explore fresh water supply problems.

The Convention, successful under the direction of G. I. R. Lore, convention committee chairman, and Philip Butler, program committee chairman, closed with a cocktail party, banquet, and dance.

# BOAT CATCHES

For Month of July

Hailing fares. Figure after name indicates number of trips.

## ROCKLAND (Me.)

Angie & Florence (4)	243,000	Mabel Susan (4)	134,500
Araho (4)	373,000	Margaret Jean (2)	51,000
Brighton (2)	350,000	Myrt II (2)	22,000
Elin B. (4)	242,000	Ocean (2)	555,000
Ethel B. (3)	7,500	Squall (2)	600,000
Flo (3)	190,500	Storm (1)	290,000
Helen Mae II (1)	52,000	Surf (2)	520,000
Jackie B. (2)	45,000	Susan L. (1)	9,000
John J. Nagle (1)	160,000	Tide (2)	585,000
Lilo (1)	22,000	Verna G. (2)	33,000
Little Growler (2)	155,000	Wave (2)	500,000
Louise G. (3)	124,500		

## Scallop Landings (Lbs.)

Pocahontas (3)	33,000
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## PORTLAND (Me.)

Allice M. Doughty II (3)	180,500	Mary & Helen (15)	211,700
Ariel (10)	164,000	Mary & Jennie (12)	142,200
Bobby & Jack (2)	195,000	Mascot (17)	182,000
Bols Bubert (12)	133,500	Medan (1)	300,000
Challenger (20)	377,000	Nancy B. (1)	15,000
Courier (2)	315,000	Ocean Life (1)	240,000
Crescent (17)	313,200	Quincy (2)	330,000
Dorchester (1)	175,000	Rebecca II (16)	207,500
Dorothy & Ethel (2)	123,000	Resolute (2)	126,000
Dragnet (3)	130,000	St. Joseph (12)	175,000
Elinor & Jean (1)	40,000	St. Joseph II (3)	24,100
Famiglia (1)	8,000	Sandra Jane (1)	21,000
Frances R. (2)	75,000	Sea Hawk (2)	215,000
Gulf Stream (2)	340,600	Surfman (18)	146,000
Helen S. (14)	135,000	Theresa R. (3)	162,000
Jackie B. (4)	132,000	Vagabond (1)	75,000
John J. Nagle (1)	160,000	Vandal (3)	204,000
Joyce Marie (4)	53,000	Vida E. II (20)	357,000
Lawson (3)	192,000	Voyager (2)	63,000
Little Flower (1)	22,000	Wawenock (2)	480,000
Marie H. (9)	114,000	Winthrop (1)	200,000
Maris Stella (1)	100,000		

## Scallop Landings (Lbs.)

Abram H. (2)	32,500	Sylvester F. Whalen (2)	57,000
Francis L. MacPherson (1)	15,000		

## NEW BEDFORD (Mass.)

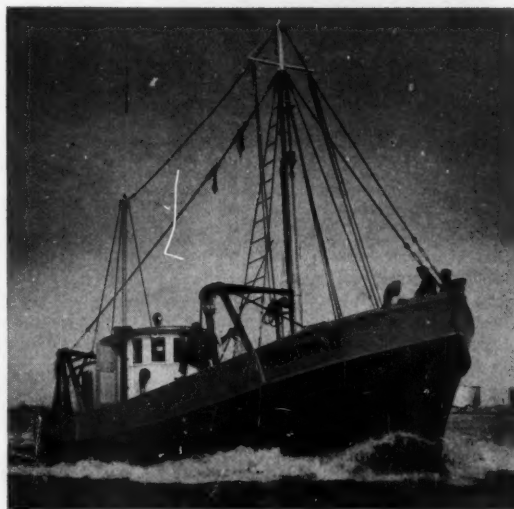
Adventurer (4)	100,200	Malvina B. (3)	90,000
Agda W. (3)	71,000	Marie & Katherine (4)	111,700
Althes (3)	93,000	Martha E. Murley (3)	62,900
Anastasia E. (1)	33,400	May E. Deon (2)	53,000
Annie Louise (2)	8,600	Mary J. Landry (3)	110,000
Annie M. Jackson (3)	86,300	Mary Tapper (3)	109,000
		Midway (3)	93,400
Barbara M. (2)	45,000	Miriam A. (3)	117,900
Brant (2)	67,700	Molly & Jane (4)	70,500
Cap'n Bill II (3)	156,900	Nancy L. (2)	62,900
Capt. Deebold (3)	71,200	New England (1)	7,000
Carl Henry (2)	85,500	North Cape (1)	24,000
Catherine & Mary (4)	128,600	North Sea (2)	66,000
Charles E. Beckman (3)	43,500		
Christina J. (2)	71,500	Pauline H. (2)	161,300
Connie F. (1)	38,500	Phyllis J. (3)	21,800
		Porpoise (1)	34,000
Eugene H. (1)	36,500	Roann (3)	80,900
Evalina M. Goulart (2)	80,800	Robert Joseph (3)	58,600
Falcon (2)	74,000	Roberta Anne (1)	29,200
Frances D. (1)	32,000	Rush (3)	113,600
Friendship (3)	77,800		
Gannet (2)	88,000	Sea Gold (3)	106,500
Glen & Maria (2)	75,300	Sea Rambler (1)	26,000
Growler (3)	101,000	Shannon (1)	10,500
		Sharon Louise (3)	67,300
Hope II (3)	116,800	Skipjack (2)	63,000
Invader (3)	95,000	Smilyn (2)	52,500
Ivanhoe (3)	97,400	Solveig J. (3)	173,700
		Stephen R. (4)	106,400
Janet & Jean (2)	77,800	Sunbeam (4)	95,800
Jenny (1)	30,500	Susie O. Carver (2)	16,900
Joan & Ursula (3)	113,000		
John G. Murley (3)	171,500	Teresa & Jean (3)	108,500
Julia DaCruz (2)	62,400	Two Brothers (3)	15,000
Katie D. (2)	70,300	Vallant Lady (2)	70,200
Kelbarsam (3)	53,500	Val T. (3)	80,000
Libby (3)	104,500	Venture I (2)	61,500
		Viking (3)	141,800
Lorine III (3)	94,000	Whaler (2)	96,000
Lynn (1)	10,900	Whaling City (2)	55,400
		Whitstone (1)	45,000
Major J. Casey (3)	94,000		

## 55-Ft. Gloucester Dragger

## "MARIANNA II"

Repowered by Allied Diesel with

## ALLIS-CHALMERS



A new Model 21000 turbocharged Allis-Chalmers Marine Diesel has repowered the Gloucester, Mass. dragger "Marianna II". The engine produces 230 heavy duty shaft horsepower at 1800 rpm., has 3.5:1 hydraulic reduction gear, and swings a four-blade 44 x 34 propeller.

Says Captain-Owner  
Cosimo Parco:

"I like my Allis-Chalmers Diesel very much. It's running very nicely, and has plenty of smooth power for towing and steaming. It's a good engine in every way."



## ALLIED DIESEL

Sales and Service, Inc.

332 Congress St., Boston, Mass. HU 2-2280



Authorized Sales and Service  
for ALLIS-CHALMERS DIESELS  
New Engines on Display  
Complete Service and Parts

Covering Massachusetts, Rhode Island,  
Connecticut, and New Hampshire

# FLOAT TYPE COMPASS



## with EXCEPTIONAL FEATURES

Service-proved,  
precision instrument for  
accurate  
navigation of  
coastal, harbor  
and inland waters

- Compass card has attached air chamber by which almost entire card weight is supported by buoyancy of the liquid. Friction and wear on pivot reduced to a minimum; compass sensitivity increased.
- Ritchie patented Fascicular Magnetic Needle. Given a much higher charge to retain unimpaired magnetism indefinitely.
- Sapphire jewels; pivots of special alloy of exceptional hardness and fineness, practically unaffected by years of use.
- Alcohol and distilled water damping fluid. Remains colorless and transparent for years.
- Bowl and Gimbals bearings of rounded V form, shaped for sufficient friction to steady the bowl, without swinging motion.

No. 58—6" Card; No. 54—7" Card.

Under lit models if desired. Mahogany boxes.

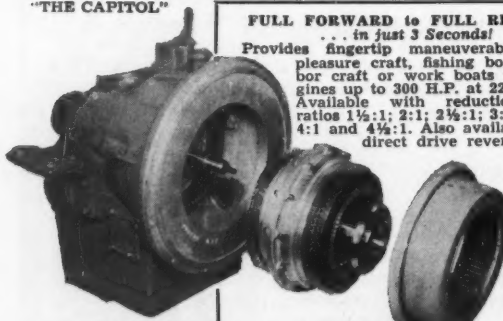
This float type compass is but one of many Ritchie precision-made compasses, including an ideal model for your boat. Ask your marine dealer or write us for catalog.

**E. S. Ritchie & SONS, Inc.**

**PEMBROKE, MASS.**

"Guiding Fully-Found Craft Since 1850"

### "THE CAPITOL"



**HYC hydraulic**  
Reverse and Reduction Gear  
Write for new catalog  
and specify ratio desired.

**FULL FORWARD to FULL REVERSE**  
... in just 3 Seconds!  
Provides fingertip maneuverability for  
pleasure craft, fishing boats, harbor  
craft or work boats with en-  
gines up to 300 H.P. at 2200 RPM.  
Available with reduction gear  
ratios 1½:1; 2:1; 2½:1; 3:1; 3½:1;  
4:1 and 4½:1. Also available as a  
direct drive reverse gear.

Special-  
ists  
in  
Marine  
Power  
Trans-  
mission  
SINCE  
1905

**CAPITOL GEARS, INC.**

Formerly Auto Engine Works, Inc.  
333(A) N. Hamline, St. Paul 4, Minn.

4DF

**Osco**

6DF

The world's most Experienced builder of  
**FORD MARINE DIESELS**

Proved by and choice of the topflight commercial fishing fleets. Low cost and backed by a service organization and a factory warranty with teeth in it. Detailed specifications from your dealer or write for the Facts...

**OSCO MOTORS CORPORATION**

Philadelphia 40-AF, Penna.

Cable: OSCOMOTORS Phila.

## New Bedford Scallop Landings (Lbs.)

Aloha (3)	36,600	Louis A. Thebaud (1)	11,200
Alpar (3)	35,600	Lubenray (2)	23,200
Amelia (2)	22,400		
Babe Sears (2)	21,400	Malene & Marie (2)	29,900
Baltic (3)	44,400	Mary Ann (3)	40,200
Barbara & Gail (2)	24,000	Mary J. Hayes (2)	22,400
Bobby & Harvey (3)	43,400	Midnight Sun (3)	35,600
Bright Star (3)	36,400	Moonlight (1)	11,200
		Muskegon (1)	5,900
Camden (3)	33,600	Nancy Jane (3)	34,700
Carol & Estelle (3)	44,800	Neptune (4)	46,000
Catherine B. (2)	24,800	New Bedford (3)	36,500
Catherine C. (2)	35,000	Newfoundland (2)	24,400
Charles S. Ashley (3)	36,000	Noreen (3)	38,300
Clipper (3)	42,000		
Dartmouth (3)	39,400	Pearl Harbor (2)	22,400
Debbie & Jo-Ann (3)	38,400	Pelican (3)	43,400
Edgartown (3)	37,000	Porpoise (2)	22,400
		Prowler (3)	36,600
Fairhaven (3)	37,000	Richard Lance (3)	30,400
Flamingo (3)	34,800	Ruth Lea (3)	35,400
Fleetwing (3)	33,600	Ruth Moses (3)	30,400
Florence & Lee (1)	15,200		
Florence B. (3)	36,000	Sandra Jane (3)	36,000
		Sippican (3)	38,800
Geraldine (2)	40,600	Snoopy (3)	36,600
Ike & Jens (3)	37,000	Stanley B. Butler (3)	45,400
Jerry & Jimmy (2)	22,400	Stanley M. Fisher (3)	35,400
Josephine & Mary (3)	35,400	Sunapee (2)	29,600
Kingfisher (3)	34,600	Tocsin (3)	33,600
		Ursula M. Norton (3)	54,900
Lauren Fay (2)	25,700		
Lillian B. (3)	36,600	Villa Riall (3)	41,900
Linus S. Eldridge (3)	37,800	Vivian Fay (3)	36,600
		Wamsutta (1)	12,200

## GLOUCESTER (Mass.)

Acme (2)	28,000	Magnolia (2)	360,000
Admiral (2)	105,000	Malolo (2)	131,000
Agatha (4)	405,000	Manuel F. Domingoes (2)	300,000
American Eagle (6)	250,500	Marianna II (8)	397,000
Andrea G. (3)	340,000	Mary Ann (7)	483,500
Anthony & Josephine (5)	144,500	Mary Jane (2)	210,000
Atlantic (2)	143,000	Mary Rose (1)	150,000
		Morning Star (7)	206,000
Cape Cod (3)	48,500		
Carlo & Vince (6)	177,000	Nancy & Maria (3)	55,000
Carmela Maria (1)	15,000	Natale III (6)	332,500
Cigar Joe (5)	275,000	Ocean Spray (1)	75,000
Curlew (2)	290,000	Ocean Wave (2)	148,000
		Olympia (6)	449,000
Dawn (1)	16,000	Our Lady of Fatima (1)	180,000
Dolphin (2)	250,000	Our Lady of Tears (1)	6,500
Eagle (5)	759,000	Phillip & Grace (5)	698,500
Edith L. Boudreau (1)	100,000	P. K. Hunt (3)	375,000
Emily H. Brown (5)	770,000	Powhatan (3)	158,000
Evelina M. Goulart (1)	100,000		
Flow (1)	260,000	Regina Maria (1)	130,000
Frances R. (5)	180,000	Rhode Island (6)	462,000
		Rosalie S. (2)	80,000
Gaetano S. (3)	340,000		
Golden Dawn (1)	10,000	St. Anna Maria (5)	114,500
Golden Eagle (2)	275,000	St. Cabrini (5)	173,500
Grace & Salvatore (5)	750,000	St. Joseph (2)	54,000
		St. Mary (9)	378,500
Holy Family (1)	160,000	St. Peter (5)	316,000
Ida & Joseph (7)	548,000	St. Peter III (6)	406,000
Immaculate Conception (5)	362,000	St. Rosalie (4)	187,000
		St. Stephen (2)	22,000
J. B. Junior (1)	175,000	St. Terese (2)	108,000
J. B. N. (6)	452,500	Salvatore & Grace (3)	225,000
Jennie & Lucia (3)	100,000	Sandra & Jean (6)	331,000
Joseph S. Mattos (1)	150,000	Santa Maria (1)	80,000
Judith Lee Rose (2)	460,000	Sea Queen (2)	67,500
		Sebastiana C. (6)	404,500
Kingfisher (2)	400,000	Serafina II (7)	367,500
Lady of Good Voyage (2)	175,000	Theresa M. Boudreau (1)	190,000
Lady of the Rosary (6)	221,000	Tina B. (3)	285,000
Little Flower (8)	336,500	Villanova (1)	230,000
Louise (2)	240,000	Vincle N. (5)	396,000
		Virginia Ann (4)	115,000
		Wild Duck (2)	310,000

## WOODS HOLE (Mass.)

Agnes & Myrnie (1)	2,300	Little Jeff (5)	14,700
America (2)	9,300	Little Lady (4)	13,100
Angeline (4)	6,400	Lizboa (1)	1,700
Angenette (3)	2,400	Madeline (3)	11,000
Angie & Myrnie (3)	11,900	Mary B. (1)	800
Arnold (4)	20,600	Mary C. (4)	4,400
Bernice (2)	8,000	Minkette (3)	8,400
Cap'n Bill II (1)	33,200	Ma Kette I (1)	3,000
Carib (3)	4,400	Morning Star (6)	20,500
Clifton (4)	16,900	Priscilla (4)	9,600
Curlew (6)	35,100	Pvt. Frank T. Kessler (4)	30,000
Dauntless (2)	15,600	Reliance (3)	7,100
Dorothy & Ethel (1)	3,200	Rosemary (2)	8,700
Dorothy & Mary (2)	23,200	Rosemary R. (2)	10,600
Driftwood (4)	6,600	Ruth & Nancy (5)	32,900
Falcon (3)	11,400	Ruth W. (2)	7,200
Gull (1)	5,500	Shannon (2)	11,200
Intrepid (3)	5,500	Spare Time (13)	3,300
Janet Elise (1)	4,100	Tip Top (2)	5,500
Jeabar (5)	4,600	Trina Lea (5)	14,300
Kathy Dick (1)	4,100	Viking (4)	12,200
Kelbarsam (1)	2,200	Winifred M. (2)	6,800



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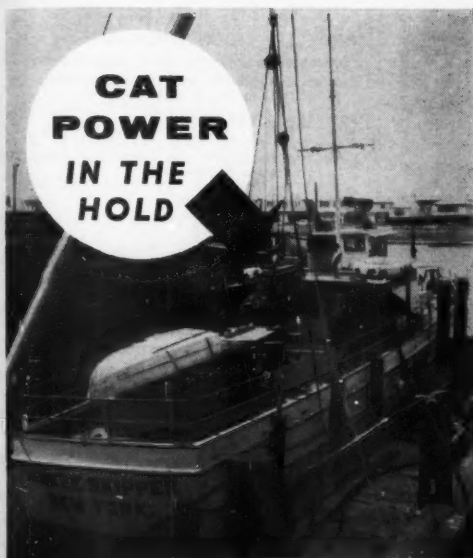
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The "Yankee Skipper," a converted Coast Guard Patrol boat is now better and faster than ever, with its pair of new Cat Marine Diesels. This is an 83', 67 ton, party fishing boat, owned by Charles Smallman, Sheepshead Bay, Brooklyn.

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136 Day Street, Newington, Conn.—Phone: (Hartford) JACKson 7-4151  
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Baby Rose (1)	60,700	Notre Dame (3)	104,500
Bonnie (2)	219,200	Ohio (1)	103,000
Buzz & Billy (3)	154,600	Olympia La Rosa (4)	203,400
Cambridge (3)	336,700	Pam Ann (2)	177,900
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Comet (3)	280,000	Rosa B. (3)	305,100
Ethelena (4)	129,000	Rosie (5)	70,200
Flying Cloud (3)	454,400	Rosie C. (3)	138,300
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Heroic (2)	190,200	San Calogero (4)	40,800
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Leonarda (3)	8,100	Terra Nova (2)	191,300
Leonard & Nancy (3)	96,700	Texas (2)	94,000
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Madonna (1)	21,300	Thomas Whalen (3)	191,400
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Maria Del Soccorso (3)	19,300	Winchester (3)	389,900
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Danforth Anchors, 192 Middle St., Portland, Me.

## ANTIBIOTICS

American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

## BATTERIES

Bowers Battery & Spark Plug Co., Box 1262, Reading, Pa.  
Crescent Battery & Light Co., Inc., 819 Magazine St., New Orleans 12, La.  
Exide Industrial Division—The Electric Storage Battery Co., P. O. Box 8109, Rising Sun & Adams Aves., Philadelphia 20, Pa.  
Mule Battery Mfg. Co., 45 River Ave., Providence 8, R. I.

## CANS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

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Marine Compass Co., Pembroke, Mass.  
E. S. Ritchie & Sons Inc., Pembroke, Mass.  
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

## CORDAGE

Bob Stone Cordage Company, Chariton, Iowa.  
Columbian Rope Co., Auburn, N. Y.  
The Edwin H. Fittler Co., Philadelphia 24, Pa.  
Lambeth Rope Corp., Box 825, New Bedford, Mass.  
New Bedford Cordage Co., 131 Court St., New Bedford, Mass.  
Samson Cordage Works, 470 Atlantic Ave., Boston 10, Mass.

## DEPTH SOUNDERS

Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.  
Kelvin & Hughes American Corp., Box 1951, Annapolis, Md.  
Wilfrid O. White & Sons, Inc., 178 Atlantic Ave., Boston 10, Mass.

## DIESEL TESTING EQUIPMENT

Klene Diesel Accessories, Inc., 10352 Pacific Ave., Franklin Park, Ill.

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Barr Marine Products Co., 2714 E. Castor Ave., Philadelphia 34, Pa.  
Burmeister & Wain American Corp., Mystic, Conn.  
Cummins Engine Co., Columbus, Ind.  
Detroit Diesel Engine Div., General Motors Corp., 13400 W. Outer Drive, Detroit 28, Mich.  
Ford Marine Engines, Osco Motors Corp., 3627 N. Lawrence St., Philadelphia 40-AF, Pa.  
Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.  
Hercules Motors Corp., 101 Eleventh St., S.E., Canton, Ohio.  
Hubbs Engine Co., 1168 Commonwealth Ave., Boston 34, Mass.; 141 Main St., So. Portland 7, Me.  
Lister-Blackstone, Inc., 42-33 21st St., Long Island City 1, N. Y.  
H. O. Penn Machinery Co., Inc., East River and 149th St., New York, N. Y.  
Perkins Machinery Co., Inc., Exit 53 Route 128, Needham Hts., Mass.; 4 Water St., Fairhaven, Mass.

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Waukesha Motor Co., Waukesha, Wisc.  
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Marine Engine Division, Chrysler Corp., 12200 E. Jefferson Ave., Detroit 15, Mich.  
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Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.  
Hubbs Engine Co., 1168 Commonwealth Ave., Boston 34, Mass.; 141 Main St., So. Portland 7, Me.

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## FISHING GEAR

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Marine Construction & Design Co., 2300 Commodore Way, Seattle 99, Wash.  
Westerbeke Fishing Gear Co., Inc., Fish Pier Road, Boston 10, Mass.

## FLEXIBLE HOSE LINES

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J. H. Shepherd Son & Co., Elyria, Ohio.  
B. F. Goodrich Sponge Products Division, Shelton, Conn.  
The Linen Thread Co., Inc., Blue Mountain, Ala.

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Winpower Mfg. Co., Newton, Iowa.

## HOOKS

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U. S. Rubber Co., 10 Eagle St., Providence, R. I.

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The Fish Net & Twine Co., 833 First St., Menominee, Mich.  
Hope Fish Netting Mills, Inc., Hope, R. I.  
The Linen Thread Co., Inc., Blue Mountain, Ala.  
Moodus Net & Twine, Inc., Moodus, Conn.  
Marion, 1453 West 123rd St., Los Angeles 47, Calif.  
Joseph F. Shea, Inc., East Haddam, Conn.  
A. M. Starr Net Co., 10 Summit Street, East Hampton, Conn.  
Western Trawl & Supply Co., Freeport, Texas.

## OIL—Lubricating

The California Oil Co., Perth Amboy, N. J.  
Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.  
Mobil Oil Co., Inc., Dept. 26, 150 East 42nd St., New York 17, N. Y.  
Standard Oil Co. of California, Standard Oil Bldg., San Francisco, Calif.

## PAINTS

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Henderson & Johnson, Inc., Gloucester, Mass.  
International Paint Co., Inc., 21 West St., New York, N. Y.  
Pettit Paint Co., Belleville, N. J.  
Red Hand Compositions Co., Inc., 1 Broadway, New York 4, N. Y.  
C. A. Woolsey Paint & Color Co., Inc., 205 East 42nd St., New York 17, N. Y.

## PROPELLERS

Columbian Bronze Corp., Freeport, N. Y.  
Federal Propellers, Grand Rapids, Mich.  
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.  
Michigan Wheel Co., 1501 Buchanan Avenue, S. W., Grand Rapids, Mich.

## PROPELLER RECONDITIONING

Columbian Bronze Corp., Freeport, N. Y.  
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.

## PROPELLER REPAIRS

Columbian Bronze Corp., Freeport, N. Y.  
Ferguson Propeller and Reconditioning Co., 1132 Clinton St., Hoboken, N. J.  
Haskell & Hall, Inc., 38 Webb St., Salem, Mass.

## PROPELLER SHAFTS

The American Brass Co., Waterbury 20, Conn.

## PUMPS

Brodeur Machine Co., Inc., Pump Div., 62 Wood St., New Bedford, Mass.

## RADAR

Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.  
Kelvin & Hughes American Corp., Box 1951, Annapolis, Md.

## RADIO TELEPHONES

Apelco Company, 213 E. Grand Ave., South San Francisco, Calif.  
Kaar Engineering Corp., 2915 Middlefield Rd., Palo Alto, Calif.  
Northern Radio Co., 314 Bell St., Seattle 1, Wash.

## RANGES—Galley

"Shipmate"—Shipmate Stove Division, Souderton, Pa.  
"Shipmate" and "Webbperfection" — Elisha Webb & Son Co., 136 S. Front St., Philadelphia 6, Pa.  
Harry C. Weiskittel Co., Inc., 4901 Pulaski Highway, Baltimore 24, Md.

## REDUCTION GEARS

Capitol Gears, Inc., 333 (A) North Hamline Ave., St. Paul 4, Minn.  
Paragon Gear Works, Inc., 628 Cushman St., Taunton, Mass.  
Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn.  
Twin Disc Clutch Co., 1341 Racine St., Racine, Wisc.  
The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.

## SHIPBUILDERS

Anderson Boat Works, Thomaston, Me.  
Blount Marine Corp., Warren, Rhode Island.  
Diesel Engine Sales Inc., St. Augustine, Fla.  
Harvey F. Gamage, So. Bristol, Maine.  
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.  
Lash Brothers Boat Yard, Friendship, Me.  
Newbert & Wallace, Thomaston, Me.  
Frank L. Sample & Son, Inc., Boothbay Harbor, Me.  
Story Marine Railway, 257 Front St., So. Portland, Me.

## STARTING FLUID

Spray Products Corp., P. O. Box 844, Camden 1, N. J.

## STEERING GEAR

Crowell Designs, Inc., 2106 Bridge St., Point Pleasant, N. J.

## STERN BEARINGS

"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

## TWINE

Brownell & Co., Inc., Moodus, Conn.  
Columbian Rope Co., Auburn, N. Y.  
Andrew Crowe & Sons, Inc., Tiogue Ave., Coventry, R. I.

## VOLTAGE REGULATORS

Safety Industries, Inc., Box 904, New Haven 4, Conn.

## WINCHES

Hancock Marine, 1567 No. Main St., Fall River, Mass.  
Hathaway Machinery Co., Inc., New Bedford, Mass.  
New England Trawler Equipment Co., Eastern Ave., Chelsea, Mass.  
Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

## WIRE ROPE

Hackensack Cable Corp., 110 Orchard St., Hackensack, N. J.  
Roebbing's Wire Rope Division, Trenton 2, N. J.

## FOREIGN BAILINGS

**25,000 RUSSIANS** are now fishing off Newfoundland in more than 160 Russian ships (some of them up to 14,000 tons).

Women work in floating fish plants, which process the entire catch, freezing or salting the meaty parts and turning the offal into fish meal.

The large number of Russian vessels has created resentment among Newfoundland fishermen and there is a growing demand that the International Commission for Northwest Atlantic Fisheries limit the number of ships per country.

**AN OYSTER FREEZING PLANT** built recently in Japan with U. S. technical aid is the first plant in Japan designed for production of fresh frozen oysters for export. The Hiroshima plant was planned and equipped under a technical agreement with a United States firm.

Thus it will be possible for the first time to export to the United States raw Hiroshima oysters, which up to now have been sold mostly in the Japanese market.

**PERUVIAN FISH MEAL** producers are seeking to limit production. Overproduction, reduced world demand, and prices below the cost of production have spurred Peruvian fish-meal producers to find some mutually agreeable method of limiting production.

Two meetings to consider proposals to that have been unsuccessful. Other proposals are being studied for subsequent presentation to the industry.

**MEXICAN SHRIMPERS MOVE** to Pacific Gulf as supply dwindles. Some 270 fishing vessels have begun moving to Pacific Coast waters because of near disappearance of giant shrimp in the Mexican Gulf Coast waters, the naval ministry reports. The ministry said the shrimp activity is down 80 percent. It said Texas shrimpers have disappeared from the Mexican Gulf Coast.

**JAPANESE WHALING FLEETS** are now operating in North Pacific. A Japanese 14,000-ton whaling factoryship sailed for the North Pacific from Yokohama with 10 catcher boats recently. The fleet, jointly operated by three Japanese fishing companies, is scheduled to continue operating until September. In addition to the factoryship and catcher boats, the fleet also includes 3 refrigerator ships, 6 carriers, and a tanker.

A sperm whale fleet, jointly operated by five Japanese companies also sailed for the North Pacific. Besides the 13,000 ton factoryship, the fleet comprises 7 catcher boats, a refrigerator ship, and 2 carriers.

**Capt. Charles Tapper**  
repowers his

**"Sea Ranger"**

with the powerful

**GM 12 V-71**  
**MARINE DIESEL**

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## Index to Advertisers

Allied Diesel Sales & Service, Inc. ....	33	Hancock Marine .....	28
Allis-Chalmers .....	25	The Harris Co. ....	38
W. A. Augur, Inc. ....	38	Hathaway Machinery Co., Inc. ....	21
Bendix Aviation Corp., Pacific Div. ....	26-27	Hubbs Engine Co. ....	37
The Boston Metals Co. ....	38	D. N. Kelley & Son, Inc. ....	22
Burmeister & Wain American Corp. ....	28	Kelvin & Hughes America Corp. ....	40
Capitol Gears, Inc. ....	34	Marine Radio & Electric Co., Inc. ....	22
Columbian Rope Co. ....	1	Mobil Oil Co. ....	39
Crystal Ice Co., Inc. ....	22	Lucian Q. Moffitt, Inc. ....	25
John S. Dunn Marine Service & Supply, Inc. ....	22	Mule Battery Mfg. Co. ....	28
East Coast Equipment Corp. ....	38	New England Marine Corp. ....	2
Isaac Fass, Inc. ....	35	Norlantic Diesel, Inc. ....	20
The First Safe Deposit National Bank of New Bedford .....	21	Northeast Marine Electronics ....	20
Glass Plastics Corp. ....	4	Osco Motors Corp. ....	34
L. M. Goff Co. ....	20	H. O. Penn Machinery Co., Inc. ....	35
The B. F. Goodrich Co. ....	5	E. S. Ritchie & Sons, Inc. ....	34
		Roebbling's Wire Rope Division ....	32
		A. M. Starr Net Co. ....	29
		Waukesha Motor Co. ....	6
		Western Trawl & Supply Co. ....	38



## BOAT & GEAR MART

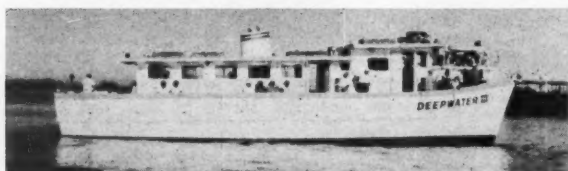
Classified Advertising Rates: \$1.00 per line, \$5.00 minimum charge. Count 9 words to a line. Closing date, 25th. National Fisherman, Goffstown, N. H.

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Maine-built lobster boat, 29½ ft., width 9 ft., draft 3½ ft. 14 years old, 100 hp. Gray, 2:1 reduction gear. New engine Fall 1955, used 3 mos. a year since. In use, present time. Boat at Sluice Dock, Guilford, Conn. Tel. Glendale 3-3829.

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67' SHRIMP BOAT, by 20' wide, built by Morehead City ship builders on 2/24/58. 6110 G.M. diesel, Lister diesel light plant, Metal Marine pilot, 150 watt Sonar radio, 5500 fuel capacity. Fully insulated. \$36,000. C. W. Dobard, 20 Laux Manor Drive, Metairie, La. VERNON 5-3266.

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Dragger *Elizabeth Ann*, 52' x 16' x 6'. D8800 Caterpillar Diesel, Hathaway winch two years old with all new wire. 25 watt Apelco radiotelephone, DR12 Bendix sounding machine. APN9 Loran, Nylon nets, 2 sets doors. Boat completely rebuilt in 1956. Everything in first-class condition. Priced reasonable for quick sale. Sickmess is the only reason for selling. If interested call or write Axel C. Weiderman, 70 Bayview Ave., Portsmouth, R. I. Telephone 221, Portsmouth.

### SPECIAL THIS MONTH

Model 860 Ross Heat Exchangers, bronze housing and heads, Cupro-nickel tubes, 3-inch inlet and outlet, brand new surplus, list price \$1050. Our price \$425 each.

Model 860 Ross lube oil coolers, bronze housing and heads, Cupro-nickel tubes, 1½-inch inlet and outlet, brand new surplus, list price \$975. Our price \$375 each.

"All parts for some engines—some parts for all engines"

BAY STATE MARINE & EQUIPMENT CO.

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Trapnet boats and nets—two 40-foot steel trapnet boats. Also, forty (40) 25 and 30-foot trapnets. For details, write H. Bonovitz, 1600 Merwin St., Cleveland 13, Ohio.

### NEW 32-VOLT 233 CFM CENTRIFUGAL FANS

233 CFM—½ HP 1225 RPM 32-volt .  
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**"Every time I pull a piston, I'm amazed  
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*says owner of the Mother Frances out of Boston*

Sam Passanisi, owner of the Mother Frances, likes to claim that his 6-cylinder Atlas-Superior diesel is the "cleanest engine in the Boston Fleet!" Other Skippers sometimes give Sam an argument on that, but even they agree Mobil Marine Oils keep diesels amazingly clean and trouble-free.

When the Mother Frances is ready to take aboard its diesel fuel and lube oil, it doesn't have to look twice for service. The Neptune, one of two Mobil dealers' tankers in Boston, is right there beside it. "Those guys never sleep!" says Sam, of the crew of the sturdy little tanker.

Top-quality products and untiring service—two big reasons why you should "make it Mobil" for your fishing vessels.

**SPECIFY A MOBIL MARINE OIL FOR BETTER NET RESULTS!**



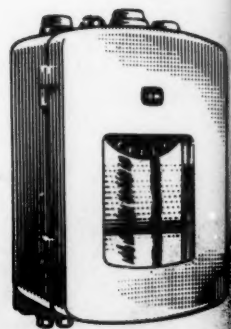
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*The New*

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***Plus Echo Vision***



Magnified viewing of scattered or isolated fish in a particular spot, plus continuous, permanent recording of an entire area, are provided by the Kelvin Hughes "Kingfisher".

The equipment comprises a Kelvin Hughes MK.IV Viewing Unit and MS29 White Line Recorder combination, which has been fully proven as a most effective instrument for depth sounding and fish detection.

In operation, the new "Kingfisher" presents permanently recorded traces of fish at all normal fishing depths. At the same time, a visual presentation can be obtained of any selected 5-fathom, 10-fathom, or 15-fathom layer of water underneath the vessel.

Fish echoes from any one of these depth layers appear as well-defined luminous traces on the screen of a cathode ray tube. A very high degree of discrimination is obtained in the visual display, with the enlarged presentation being on a scale of one fathom to one inch.

All you have to do to get magnification is to turn on the viewing unit. Twin vertical lines automatically appear on the recorder chart to mark the upper and lower limits of the visually scanned depth layer. The Viewing Unit operates over a range of 0-360 fathoms.

*For more information and dealer openings, write or phone*



**"Best Recorder I ever had" says  
Capt. Albert Dahl of "Monte Carlo"**

Here is the Kelvin Hughes White Line Recorder on the deep sea lobster dragger "Monte Carlo". She is owned by Chrisbe Corp. and operated by Benson Lobster Co. of Portland, Me. William Benson, president, says it's a really good instrument with outstanding performance.

The Kelvin Hughes White Line Recorder is designed to separate bottom fish from the bottom echoes. The presence of fish shows clearly since the white line follows the black sea bed contour and provides a sharp color contrast.

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